

**A Historical Institutional Analysis of the Evolution of  
South Africa's Municipal Electricity Sector within the  
Broader Electricity Supply Industry**

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January 2020

Thesis Presented for the Degree of

**DOCTOR OF PHILOSOPHY**

In the Faculty of Engineering and the Built Environment

**UNIVERSITY OF CAPE TOWN**

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I, Theo Covary, declare that this thesis, in concept and execution, has been composed solely by myself, except for the normal guidance received from my supervisor. This thesis has not been submitted, in whole or in part, in any previous application for a degree at this University or any other University. Except where it is stated otherwise by reference or acknowledgment, the work presented is entirely my own.

Signed by candidate

## Acknowledgements

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- My supervisor Dr Andrew Marquard for his guidance and insights. Then, my co-supervisor Dr Grové Steyn for his technical inputs.
- To all those who agreed to be interviewed and who were so generous with their time and personal records. The long conversations about events from as far back as the 1930's right through to 2017 were fascinating, enriched the research and a highpoint for me.
- To the AMEU secretariat, managed by van der Walt & Co since the 1980's, which has preserved reports, minutes and event proceedings dating back to 1915. This thesis is largely anchored on these documents and my task was made significantly easier by having access to a largely complete, accurate and detailed account of events. Here, I take the opportunity to posthumously thank Mr Ewing, the AMEU secretary, who retired in 1974 after many decades of dedicated service and meticulous record keeping.
- Through this research I have become acutely aware of how insidious, abhorrent and destructive racial segregation truly is, and which existed long before it was formalised by the National Party when they came to power in 1948. My hope is that some of what I have discovered is communicated to the reader.
- To Mike and Rob for your support and willingness to listen to my progress updates at our weekly breakfast meetings.
- To Strato for reviewing, editing and meeting my deadlines. It was a long innings and you were there right to the end.
- George Angelopulo for your time, reviews and guidance.
- Finally, to Phlee, Margot and Constantine who secretly kept thinking "Right, what's all this, then?", but supported me regardless and are my biggest supporters.

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## Acronyms

ADAM	Approach to Distribution Asset Management
AGSA	Attorney General of South Africa
AMEU	Association of Municipal Electricity Undertakings
ANC	African National Congress
ASGISA	Accelerated Shared and Growth Initiative for South Africa
BLA	Black Local Authority
BBBEE / BEE	Broad Based Black Economic Empowerment / Black Economic Empowerment
BLA	Black Local Authority
CDF	Capital Development Fund
CoJ/City	City of Johannesburg or The City
CIGFARO	Chartered Institute of Government Finance, Audit and Risk Officers
EDI	Electricity Distribution Industry
Eskom	National Electricity Utility – Electricity Supply Company. Previously Escom/Evkom
EE	Energy Efficiency
ECB	Electricity Control Board – Replaced by NER and then NERSA
ESI	Electricity Supply Industry
DA	Democratic Alliance
DME / DoE	Department of Minerals and Energy (until 2009) Department of Energy (from 2009)
DPE	Department of Public Enterprise
GEAR	Growth Employment and Redistribution
GJMC	Greater Johannesburg Metro Council
GNU	Government of National Unity
HI	Historical Institutionalism
IMF and WB	International Monetary Fund and World Bank
ISMO	Independent System Market Operator
IPP	Independent Power Producer
IDP	Integrated Development Plan
JEU	Johannesburg Electricity Undertaking (City Power from 2000)
LED	Local Economic Development
ME	Municipal Entity
MEC	Mineral Energy Complex
MEU	Municipal Electricity Undertakings
MLC	Metropolitan Local Council
MM	Merz McLellan (Electrical Consulting Engineers) now Mott McDonald
MW / GW	Megawatt / Gigawatt
NDP	National Development Plan
NER / NERSA	National Electricity Regulator of South Africa (previously NER)
NT	National Treasury
NP / Nats	National Party
PC	President's Council
PE	Public Entity
RDP	Reconstruction and Development Programme
REDs	Regional Electricity Distributors

RE	Renewable Energy
REIPPPP	Renewable Energy Independent Power Producers Procurement Programme
RSC	Regional Services Council
SAR	South African Railways
SOE	State Owned Enterprise
UP	United Party
UME / SALGA	United Municipal Executive replaced by South African Local Government Association after democratic elections (1996)
VFPC / VFTPC	Victoria Falls (and Transvaal) Power Company
WLA	White Local Authorities

## Abstract

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This study has been partly inspired by the fact that historical narratives on the evolution of the South African Electricity Supply Industry (ESI), have for the most part focused on the national vertically integrated utility, Eskom; with far less attention being paid to the role that the municipal electricity undertakings (MEU's) have, and continue to, play. Indeed, this is somewhat surprising if one considers that MEU's began operating more than 20 years before Eskom's 1923 formation; and perhaps this lack of focus on MEU's is compounded by Eskom's operational crisis from 2006 (threatening its ongoing viability), which has overshadowed the perilous situation that MEU's have found themselves in.

The research thus has two objectives. The first is to provide a detailed historical account of the role of MEU's and their contribution to the country's ESI from their genesis; while demonstrating the linkages between Eskom, MEU's and the three tiers of government. The second then examines how from the formation of the Union (1910), two fundamental but diametrically opposing objectives continue to prevail: 1) An over-burdened, financially 'self-sufficient', local government, whose limited scope to collect revenue means electricity surpluses must be maximised to cross-subsidise its operations; and, 2) A vertically integrated utility, mandated to generate electricity at the lowest unit price, so as to provide the energy intensive economy with a competitive advantage. These contradictions, which have endured for many decades, reached fever pitch in the last 20 years, contributing significantly to the demise of ESI reforms initiated in 2000 and abandoned in 2010. Simultaneously, they have worsened the crisis of local government, which is constitutionally mandated to deliver basic services to its constituents, whose failure to do so, in many instances now threatens national government legitimacy at the most fundamental level.

Within this context, the research, (based on the premise that history and institutions matter), employs the theoretical framework of new institutionalism, as applied through the lens of historical institutionalism (HI). Here, application of HI's core tenets revolves around identifying and explaining the critical junctures which create path dependency and institutional lock-in, while also accounting for incremental change which undoubtedly exists over a 120-year period. However, the unjust social and economic history of the country, where political decisions (pre and post-apartheid) have had a disproportional impact on state entities, requires closer scrutiny. For this, a detailed conceptual framework is employed to disentangle the complex relationship that has developed between the three tiers of government and their respective interacting powers.

Ultimately, in delivering a detailed historiography of municipal electricity supply, the research posits that the ESI requires deeper fundamental reform than envisaged in 2000; and that most importantly, this must take cognisance of the extent to which MEU's are embedded within local government. This, the research believes, will increase the likelihood of local government participation and acceptance; perhaps pointing to an as yet unexplored path forward out of the South African ESI's current quandary.

**Key topics:** Municipal ESI; local government functions and legitimacy; new institutionalism; historical institutionalism

# 1. Introduction, Research Objectives and Outline of the Research

---

## 1.1 Motivation for this Study

In 2013, after seven years of uncertain electricity supply and regular blackouts, South Africa was in a state of crisis and the national utility's (Eskom<sup>1</sup>) strapline of '*keeping the lights on*' had shifted from a mantra to an urgent national goal. By any account a less than lofty national ideal.

Predicted as far back as the mid to late 1990s – and regardless of whether the supply shortages were due to a decade's inaction or immediate circumstances – after more than 20 years of over-supply and close to 30 years since the last electricity shortages, to continue with the Eskom metaphor, in December 2005 the lights went off and the Western Cape was plunged into darkness. But this was only a teaser of what was to come; albeit that national government and Eskom quickly moved to assure that the problem could, and would be, contained; and that there was no crisis (Le Roux, 2006). Such hopes however quickly faded when the entire electricity system came close to collapsing, necessitating national rolling blackouts in late 2007 and early 2008; with massive repercussions to citizens' daily lives and the economy, and raising serious concerns about the country's ability to host the Soccer World Cup in 2010.

Civic society was understandably frustrated, and to an extent enraged, with many questions being asked about Eskom management and government planning (Creamer 2008; Mail & Guardian 2008). It was truly a 'fallen hero' moment in the eyes of many South Africans, because Eskom had been specifically created with the objective of providing a cheap and sufficient national supply of electricity, which it had done successfully for decades. Formed in 1923 as part of the country's industrialization strategy and integral thereto, it has become the backbone of the country's energy intensive economy. In 2000, Eskom generated more than 95% of South Africa's electricity, undertook all transmission and shared distribution with municipalities (Municipalities accounted for approximately 40% of sales revenue and 60% of its customer base) – in a classic case study example of the traditional vertically integrated utility model. It was the sixth largest utility in the world (fourth in the 1980s) and a global force in the international power sector. Indeed, just a year later, in 2001, it won the Financial Times Global Power Company of the Year

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<sup>1</sup> Established in 1923 as the Electricity Supply Commission (ESCOM), also known by its Afrikaans name Elektrisiteitsvoorsieningskommissie (EVKOM), by the government of the Union of South Africa. These two acronyms were combined to form Eskom in 1987 under the Electricity Act (40) which was passed to corporatize the utility. Eskom is, and has always been, wholly owned by the government. The utility is the largest producer of electricity in Africa, is among the top seven utilities in the world in terms of generation capacity and among the top nine in terms of sales. It is the largest of South Africa's state owned enterprises. The company is divided into Generation, Transmission and Distribution divisions. Generating 95% (including 5% imports) of the country's supply, municipalities 1% and others 4% (inter alia Independent Power Producers (IPPs)). As the only transmission licensee Eskom is responsible for all transmitted electricity. The responsibility for distribution is shared between Eskom, the municipalities and other licensed distributors. About 180 municipalities distribute 40% of electricity sales to 60% of the customer base. Annually in consultation with the Minister of Public Enterprises, Eskom agrees on its performance objectives, measures and indicators in line with government treasury regulations under the Public Finance Management Act. The annual targets are annexed to a list of principles agreed between Eskom and its shareholder (the shareholder compact) and regular reports are provided. The compact does not interfere with the normal principles of company law. The relationship between the shareholder and board is preserved. The board ensures that proper internal controls are in place and that Eskom is effectively managed. The compact promotes good governance by helping to clarify the board and shareholder roles and responsibilities and ensures consensus on Eskom's mandate and key objectives. Eskom has a unitary board structure with a majority of independent non-executive directors. The directors, appointed by the shareholder, are drawn from diverse backgrounds (local and international).

Chapter 6 outlines how Eskom and then Eskom governance structures have evolved since its founding - Chapter 6.4.2 considers the 1910 Power Act and the 1922 Electricity Act, Chapter 6.5.2 details the reforms taken to 'corporatize' Eskom to Eskom in 1987, and 6.6.2 lists the Acts and Regulations which govern it in 2018.

*Award for its technical excellence in plant production, maintenance and operation.* The question that begs asking then is: How could chronic supply shortages have occurred merely four years on? In fact, more appropriately: Why did these supply shortages persist for so long? There was no end in sight in 2013; and the country still lived and functioned under the constant threat of blackouts. To make matters worse, the two coal fired power stations (9.6 GW) that Eskom was building, were bedevilled with huge cost overruns and delays; and continue to be in 2017. Indeed, on this trajectory, the demise of Eskom itself, and at the very least in its current structure, is predicted (Jaglin & DuBresson, 2016). The crisis however also unveiled opportunities: Was it possible that coal's stranglehold on South Africa's electricity production via the total dominance of coal-fired power stations in electricity generation, would finally be challenged? Would this crisis be the catalyst of wholesale reform in the sector and targeted integration of renewable energy sources into the national grid? The signs were promising: 1) The National Renewable Energy White Paper, which set a 10 000 GWh target of RE generation over a ten-year period (2003-2013) and which had largely been ignored until 2008, was remembered and dusted off, and Eskom announced that its Solar Water Heater rebate scheme would install 825 000 units over a five-year period and in so doing contribute 23% to the target. Renewable Energy (RE) feed-in-tariffs were announced in 2009 – converted to a bidding process by a ministerial determination in 2011 – which granted generation licenses to the private sector. By 2013, after three rounds of bidding, 64 projects valued at US\$14 billion to generate 3.9 GW had been selected (Eberhard, 2014); 2) Even energy efficiency (EE) now joined the party and the 2005 National Energy Efficiency Strategy, which set an overall voluntary 12% reduction in energy consumption by 2015, received attention. Eskom identified EE as the most effective and efficient way to reduce demand in the short term, especially during peak periods, while supply issues were being addressed. Its Demand Side Management programme, subsequently renamed Integrated Demand Management (IDM), was launched in earnest in 2008. All sectors and users were eligible for participation, from carefully selected individual projects at mines and heavy industry where multiple MW could be removed, right down to small projects that saved watts but lent themselves to easily executable and repeatable actions, such as efficient lighting rollouts and retrofits. By way of example, in 2012, millions of compact fluorescent lights had replaced incandescent light bulbs (and by 2016 when the initiative ended over 70 million had been distributed (Eskom, 2018); 3) National Treasury also made discrete funding available to municipalities to undertake internal EE projects, and levied taxes on incandescent lightbulbs and on the sale of electricity generated from non-renewable resources; and 4) Industry and government came together to sign the National Energy Efficiency Accord in 2009, where 40 large users committed themselves to EE strategy targets. But would such programmes result in structural changes or were they a short-term response to see the country through the crisis?

Here, the underlying motivation for this study stemmed from numerous consulting assignments undertaken on behalf of government and international development agencies from 2007, seeking ways out of the crisis<sup>2</sup>. More specifically, I completed several detailed EE barrier analyses, which found that the country's expectations of abundant, stable supply and low electricity tariffs, (Eskom's mandate since 1923), were entrenched and ingrained in the energy intensive nature of the economy and in the attitude of both large and small users; making the barriers plentiful and stubborn. Electricity users, especially the large ones, fixated on low tariffs and inflexible demands for incredibly unrealistic short pay back periods, which made almost all EE investment impossible. This was compounded by the plain truth that during an

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<sup>2</sup> My work assignments have never dealt with the research topic and have been limited to developing and assessing energy efficiency interventions. I have never been employed or contracted by City Power (or any other municipality). My work has not provided me with any undue advantages or access to individuals – a more detailed explanation on personal bias is provided in Chapter 1.6.3



outage, EE didn't help much at all. Wasn't the solution then ensuring individual energy security? Installing a generator would allow businesses or households to continue during outages. But increases in the frequency of outages, a daily occurrence during certain stretches, unfortunately only deepened the mind-set of individual survival over a coordinated approach. Peculiarly, national government and Eskom-sponsored EE efforts were being paid little more than lip service by the major metropolitan municipalities<sup>3</sup>. The long-term benefits of sustainable energy consumption were relatively straightforward and obvious. But after considering events, a more complex phenomenon worthy of deeper investigation could also be seen manifesting in the triangular dynamics between: 1) Eskom's model of monopolising generation so as to benefit from economies of scale, which was a government priority and meant that Eskom always had its ear; 2) The steady but ever-increasing pressure on national government to balance economic growth policies, which were rooted in an energy intensive mind-set, against more recent national and international pressure to commit to environmental sustainability, such as climate change targets; and, 3) The provision of services (electricity, water, refuse removal and others), as a municipal function from the turn of the previous century, which was formally allocated to municipal government in the 1996 Constitution. Ultimately, it is these triangulated dynamics of "coopetition", evolving now for over a century, which inspired this study; and while the research uses an established theoretical framework, its intention is not to develop new theory. The focus falls rather on the detailed examination of a century-long course of events, within and facilitated by, a uniquely triangulated historical context worthy of in-depth analysis – as viewed and scrutinised through the analytical prism of established theoretical tenets. In this the researcher believes that the study has proved successful, in that it has provided a means (detailed & chronological institutional analysis) to illuminate and unpack the dynamic, historical, politically rooted, complexities that today impact electricity provision in contemporary South Africa.

## 1.2 Contextual Background – The Development of the ESI and its Stakeholders

The development of South Africa's Electricity Supply Industry (ESI) has several interesting and somewhat unique features. The first is that the discovery of the country's mineral wealth – diamonds in Kimberly (1870's) and gold in Johannesburg (1880s) – coincided roughly with great advancements in electrical generation technology, which made electrification technically and financially viable. Kimberly switched on its electric streetlights in 1882, becoming the first town to do so in Africa and the Southern Hemisphere; and the first town in South Africa to have a municipal electricity undertaking<sup>4</sup> (MEU). The second feature is one of unusually rapid development, largely because the great quantities of power needed by the gold

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<sup>3</sup> At the southern tip of Africa, the Republic of South Africa is a parliamentary republic with a three tier system of government. Government is divided into three parts: The Executive (the Cabinet), Legislature (Parliament), and Judiciary (the courts). The Executive is responsible for ruling the country through different departments or ministries. Parliament is made up of two groups, the National Assembly and the National Council of Provinces (NCOP). The National Assembly is made up of all the Members of Parliament (MP's) that got seats in the general elections. The NCOP represents the nine provinces in the national government and every province has ten representatives in the Council. The two highest courts in South Africa are the Constitutional Court and the Supreme Court of Appeal. South Africa's government differs greatly from those of other Commonwealth nations. The national, provincial and local levels of government all have legislative and executive authority in their own spheres and are defined in the Constitution as "distinctive, interdependent and interrelated".

There are nine provinces which are divided into 52 districts: 8 metropolitan and 44 district municipalities which are further sub-divided into 226 municipalities. In 2016 the country's population was estimated to be 56 million, 8 million of which reside in Johannesburg, its biggest city. For a detailed explanation see Chapter 4.6.5. For a map please see Figure 4.2 and Table 4.6 explains the categories of municipalities

<sup>4</sup> The term "electricity undertaking" was introduced by the Transvaal Power Act (Act 15 of 1910) which defined the generation and distribution of electricity in a specific area. In 1956 the AMEU adopted the following definition: A local authority carrying on an electricity supply undertaking". "Supply" included generation and distribution (Chapter 7.4)

mines quickly attracted power companies and international investors. Thirdly, the predominance of the mining industry meant that supply of electricity to city and town residents, which was more complicated and financially less lucrative, was left to the municipalities. Thus, from inception, the Electricity Supply Industry (ESI) developed in two separate streams.

Recognising from the outset that the country's mineral resources were a 'wasting asset' which would inevitably be depleted, the new government after the formation of the Union of South Africa in 1910, moved quickly to develop and implement an industrialization strategy to modernise – using its mineral wealth as springboard and first pillar. The second pillar, racial segregation, was deepened, in that the black population was now viewed as an inexhaustible and cheap source of labour. And the third pillar, was the extension of the ultimate requirement of the mining industry: universal, cheap and reliable power. Government's priority was to consolidate and take control of the private sector utilities supplying industry and mines, which it achieved through the creation of the Electricity Supply Commission (Escom). Municipal ESI<sup>5</sup>, an important but secondary priority, was ultimately dealt with in the 1960s; but checked in the interim by ring-fencing municipal ESI operations to their area of jurisdiction and imposing maximum supply limits to individual users.

As apartheid inevitably became untenable, and internal and international pressure mounted, the government became increasingly isolationist and focused on self-sufficiency. Energy was key, and Escom was allowed significant leeway if it supplied the power the country needed. For example, its 'innovative' funding practices, which were unlikely to meet basic financial accounting guidelines, were tolerated, as they eliminated the need for government to provide funding. Inevitably, this went too far and by the early 1980s large tariff increases (to fund its construction programme) had the public and industry baying for action. This was containable, but Escom erred by provoking the ire of the authoritarian state president PW Botha, who immediately reigned it in. Forced to modernize and subscribe to credible financial practices, Eskom from 1987 emerged an unlikely hero before and after the first democratic elections in 1994, with its noteworthy contributions to electrifying the previously unserved, or very under-served, black areas. Eskom, once again, enjoyed a prolonged golden era, until the 2005 blackouts.

The narrative described above, has been well researched and documented from as far back as the 1970s. On the history and role of Eskom, *inter alia*, see (Fine & Rustonjee 1996; Christie 1984; Horwitz 1994; Conradie & Messerschmidt 2000; Steyn 2001; McRae 2006; Jaglin & DuBresson 2016); on energy policy (Fine & Rustonjee 1996; Marquard 2006; Eberhard 2000; Eberhard 2005b; A Eberhard 2007). Research literature on the development of South Africa's industrialization policy and the role played by the state abounds, and there are too many resources to list here, but are referenced to in the research. What is clear however, is just how pervasive electricity, and Eskom by default, is in South Africa – succinctly summed up by Dr de Beer<sup>6</sup>:

*"If you control Eskom, you control the South African economy."*

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<sup>5</sup> The research refers to both municipal ESI and EDI. MEU's until the late-1960s generated and distributed electricity within their jurisdiction, hence ESI. In 1969 municipalities agreed to relinquish their right to generate electricity in return for exclusive distribution rights, transforming to EDI. The terms are not used interchangeably but refer to the time periods, where both periods are being addressed then Municipal ESI is used. The events are detailed in Chapter 6.4.1

The Electricity Pricing Policy of the South African Electricity Supply Industry, issued by the Department of Minerals and Energy (2008) defines EDI as the "distribution industry connected to supply voltage not exceeding 132kV" and ESI as "Generation, transmission and distribution".

<sup>6</sup> Interview held with Dr W de Beer, ex-CEO of EDI holdings – 23 November 2016.

The narrative that has however received far less attention, albeit that it is a key component of the triangulated dynamics spoken of earlier, is municipal ESI; and it is the discourse around this element that the research aims to contribute to – providing a hitherto relatively unexplored perspective on the critical role that municipal ESI has played in the economic and political dynamics of electricity supply for over a century in South Africa.

### 1.3 Municipal ESI as a Subject for this Study

Internationally, strong local government<sup>7</sup> is viewed as desirable. It is at the forefront of service delivery, and, in theory, is more readily held accountable on issues that directly impact on residents. It is much harder to do this if these services are administered by the centre, where national interests take priority in voting decisions. Residents are also more likely to trust local government than national government (Siddle 2011, p.3). Neglected and subordinate to provincial and national government under apartheid, local government was elevated in the 1996 Constitution to a sphere of government, giving it the same standing as the other two tiers. We are all however acutely aware that being independent is difficult without the requisite financial means; and so it is with local government. The greater the reliance on national transfers and grants, the higher the probability that they are conditional or subject to preferred policy directions. And therein lies the rub. Central authorities are loathe to share their tax raising instruments with other tiers of government for several legitimate reasons: over taxing; tax exporting; the efficiency of centralized collection; taxpayer perceptions of double taxation; overseeing broader objectives of income redistribution or macroeconomic stability (Bird 2011; Bird 2001; Slack 2009; Martinez-Vazquez 2015; Bahl & Linn 1992). This leaves property tax as the main, and in many instances the only, true tax revenue source for local government. In South Africa, the decision to formalise the established municipal practice of using surpluses from user fees to fund their activities in the 1996 Constitution and prohibiting local government from levying taxes that competed with national government's revenue collection, seemingly addressed many of the issues. Given the politically charged, weak economic conditions and the imperative of independent and democratic local government, the solution may have been the most appropriate. But was a different model ever an option?

Municipal ESI has a longer history than Eskom. The Association of Municipal Electrical Engineers (now the Association of Municipal Electricity Undertakings - AMEU) was formed in 1915, when 22 engineers from 17 municipal towns got together to promote common interests, such as technology, national standards, tariffs and distribution systems. Over time, as cities grew, so did the demand for electricity, and the municipal electricity undertakings became utility companies, generating and transmitting within their supply area. MEU's were known for their competence and operated profitable businesses, which the municipal finance departments were quick to recognize and exploit. But was this a good idea? The undertakings did not believe so, arguing that inflating tariffs to avoid increasing property taxes, was effectively levying a tax on electricity, which may be counter-productive because consumers could respond by reducing their consumption or switching to other fuels. The debate between councillors, who supported the relief of rates from electricity surpluses, and the electricity undertakings, who did not, raged for over 15 years, while the practice continued and gained momentum, making its reversal more

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<sup>7</sup> The thesis refers to both local government and municipalities. These terms, for the purposes of this research have the same meaning and are used interchangeably to avoid excessive use of the same word.

difficult. Ultimately, political expediency won the day and in the early 1940s the practice had been established and accepted.

Over the next two decades, municipal electricity undertakings went from strength to strength. Indeed, during the 1940s and 1950s when Eskom was still establishing itself and struggling to meet the ever-increasing demands from mining and related energy intensive sectors, it entered into long term supply agreements with the Johannesburg electricity undertaking and did not object to their applications for the construction of new generation plants. Eskom reversed its decision in the mid-1960s, when its build programme had stabilised and a national grid was within grasp, by convincing government not to issue any new generation licenses to municipalities, but did not object to their existing right to distribute electricity. MEU's were forced to squeeze as much life as they could from their existing power stations and concentrate on their distribution grids. Entering into supply contracts with the only supplier, Eskom, made them price takers with little room for negotiation. With national government putting all its energy into defending and maintaining apartheid, little attention, and even less funding, was made available to municipalities who were expected to be self-funding. The surpluses from user charges for municipalities to fund their operations now became indispensable.

The onset of democracy brought a new set of issues for municipalities. Black townships, largely ignored by the white local authorities, were now required to be integrated into their jurisdictional areas and properly serviced. Eskom, under its *Electrification for All* programme which started in the late 1980s, had taken the lead in this regard – rapidly overshadowing the apartheid's government efforts in the 1980s to provide services to black areas funded by the Regional Services Council (RSC) levy which was collected in white areas<sup>8 9</sup>. This put municipal electricity undertakings under immense pressure to respond and keep up, while facing structural, technical and financial challenges, such as having to absorb new supply areas with different equipment, or having funds previously allocated for capital projects frozen or arbitrarily withdrawn for non-electrical projects. Protecting and maintaining user fees became a municipal priority.

Within this context, the 1998 Energy White Paper then detailed national government's plan to reform the entire ESI. For distribution, this implied the creation of between 5 – 8 regional electricity distributors (RED's). The financial implications for municipal revenue and financial standing were massive. Lengthy and detailed attempts to develop a mutually acceptable model, which came at great cost, failed; and REDs were officially declared dead by cabinet in 2010. Generation and transmission reforms did not fare much better, and the ESI looks very much like it did before the white paper was published.

## 1.4 Hypothesis, Research Objectives and Research Questions

With reference to the above-mentioned interlocking dynamics, the underlying hypothesis of this research is that the provision of basic services for the majority of South Africans who were side-lined under apartheid, fell at the feet of local government – as mandated in the constitutional, policy and regulatory

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<sup>8</sup> During apartheid, local government was split according to race. As a result, local government was disjointed and separate infrastructure existed for each race group, with white residential areas well serviced and areas inhabited by all other race having a very low level of service. The Regional Services Act (1985) aimed to achieve economies of scale and increase efficiency by reducing the duplication of services by providing them on a joint basis. To fund the programme, the Act called for a levy to be charged by employers on employee wages which had to be paid in their region. A detailed explanation is provided in Chapter 4.4

<sup>9</sup> During the apartheid, legislation segregated people on racial classification. The Population Registration Act No. 30 of 1950 divided the population into three main racial groups: Whites, Natives (Blacks), Indians and Coloured people (people of mixed race). Race was used for political, social and economic purposes. See Chapter 4.4 Segregationist Policies and Footnote 33 for more information

framework following the 1994 democratic elections. In this, bringing government closer to the people was to be achieved by adopting the principles of decentralised government, which in turn would strengthen democracy. Thus, the long-held practise of cross-subsidising non-related municipal functions from the surpluses generated from the provision of services, primarily electricity distribution, was essentially enshrined in the constitution. But in providing a reliable revenue source, it entrenched an unsustainable business model for MEU's. More significantly however, this action resulted in much deeper implications for the national ESI; and is one of the contributing factors pushing the national ESI to breaking point. Indeed, national government soon recognised the consequences of this decision and from 2000 attempted to reform the sector under the decade-long RED's initiative, which it was ultimately forced to abandon – leaving the electricity distribution model that has been in place since electricity was first supplied by municipalities, largely unchanged. Ultimately, national government's failed reform efforts, which did not lack commitment or conviction, point to the complex linkages which exist between: 1) Local government and Eskom (its competitor and supplier, in a strained relationship of "co-opetition"), which by extension includes national government in the role of Eskom's only shareholder; and 2) local government as the 'political master' of MEU's. Here, conflict between Eskom, government (national and local) and MEU's, is not a new development and can be traced back to the start of the 20<sup>th</sup> century. Indeed, the vested interests which developed over many decades and that are now firmly entrenched, point to the need for much deeper understanding of the situation, if effective and lasting reform are to be accepted by all affected stakeholders. Ultimately, failure to address the status-quo is likely to further hamper local government in achieving its service delivery mandate; have significant negative financial and operational impacts on the national utility; be a drag on the national and municipal economy; and compromise and frustrate related national policies, such as climate change and energy efficiency targets.

Accordingly, the next step is identifying an appropriately suited framework which can encapsulate the intricacies of political and economic decisions over such a long period of time – one that acknowledges that historical developments are seldom straightforward or linear. Moreover, a key measure is the ability to focus on the dynamics of the power relations present in the existing institutions which provided certain actors or interests greater power than others in the creation and future trajectory of new institutions. A framework able to identify the reasons why a direction pursued over others yields two outcomes. Firstly, it isolates the motives of the dominant vested interests. And secondly, access to the actual, rather than perceived or assumed available alternatives discarded at the time allows for a more complete understanding of the issues at play, facilitating case study counter-factual analysis. The hypothesis recognises institutional change has occurred in South Africa over the last 120 years, but notwithstanding these changes, the core tenets of policies initiated in the early 1900's continue to influence decision-making. The practises of state institutions, where the forces inertia has taken hold, are seemingly impervious to change. These themes of historical change and path dependency, which is not limited to history generally, need to be interrogated appropriately to gain a better understanding of: 1) Why events have unfolded as they have; and 2) The outcomes of identified critical junctures of the mandate of MEU's and the municipal funding model in South Africa. As the relationships between the three tiers of government are complex, complicated further by the national monopolistic utility, and include relational, regulatory and funding policies (Elson, 2008 pg 6) each dimension needs to be analysed separately and as a whole.

Based on the concept of path dependence, historical institutionalism provides a robust framework to explain present day outcomes by recognising the starting point and then tracing the sequence and timing of institutional decisions and exogenous events to identify those that matter and why. Thus, a framework

deemed suitable and appropriate for this study. As McCarthy (2011, pg 4) explains in selecting historical institutionalism as the appropriate framework to assess the transformation of Ireland 1958 to 1993:

*“For historical institutionalists history really matters because the present and the future are connected to the past by the continuity of a society’s institutions. At the heart of historical institutionalism is the idea that policy choices made when a policy is being initiated or an institution formed will have a continuing influence long into the future. Not only that, the path chosen may often be sub-optimal due to compromise and political expediency”*

The research intention, and its academic contribution, is thus neither to create new theory, nor to attempt to accurately predict the future, (although likely outcomes will be put forward based on observations made), but rather to untangle the dynamics of the three key role-players in the ESI over a period of 110 plus years. In this, the research has the following objectives:

1. To provide a detailed historical account of the role of MEU’s and their contribution to the country’s ESI from their genesis, while demonstrating the linkages between Eskom, MEU’s and the three tiers of government, within the framework of historical institutionalism and in so doing assess its effectiveness.
2. To examine how, from the formation of the Union (1910), two fundamental but diametrically opposing objectives continue to prevail: 1) An over-burdened, financially ‘self-sufficient’, local government, whose limited scope to collect revenue means electricity surpluses must be maximised to cross-subsidise its operations; and, 2) A vertically integrated utility, mandated to generate electricity at the lowest unit price, so as to provide the energy intensive economy with a competitive advantage.

It follows that two corresponding research questions require addressing:

1. What were the key political decision points that shaped and continue to influence municipal ESI (EDI from 1969)?
2. To what extent was the inability of local and national government to find a political solution in the RED’s reform process, a product of underestimating broader ESI dynamics and the stubbornness of many decades of an entrenched status quo?

Ultimately then, just as the relationship between Eskom and the national economy has been extensively researched and commented upon; this researcher believes that the links between the ideals of decentralized local government and the realities of municipal electricity operations and municipal finances, too offer a worthy subject for more detailed analysis, within acknowledged theoretical frameworks.

## 1.5 Justification for this Research

Local government is mandated to provide services to all its citizens to improve their quality of life, while creating an infrastructural environment which enables economic activity and creates opportunities – by all accounts a significantly important responsibility. This stemmed from the country’s constitutional fathers opting for decentralised local government as an additional means to strengthen the nation’s nascent democracy; which was indeed demonstrated in the 2016 local elections, when the electorate sent

a strong message to the ruling party occupying national government, with many loyal members voting for opposition parties. Of course, the decentralised approach is most effective when municipalities can generate most of their revenue requirements, so as not to be excessively beholden to national government for funding, which is the primary reason for the constitution granting them exclusivity on property taxes and the provision of municipal services. However, since the early to mid-2000s, there has been undeniable evidence that local government is failing in its duty to meet its responsibilities – as evidenced by several national government interventions, from turn-around strategies and training, to increased funding.

In response to this intense pressure to improve existing performance, municipalities have taken drastic measures, which include reallocating budgets, delaying appropriate capital investments and avoiding necessary maintenance projects, until being able to find themselves on a firmer financial and functional footing. This is most evident in their electricity distribution networks, where the investment backlog rose to over R68 billion in 2017, from R28 billion in 2008.

Under such circumstances, one could thus posit that gaining a detailed understanding of the municipal business model's reliance on surpluses generated from electricity distribution services, is paramount. It could also be argued that the issues involved are self-explanatory and there for all to see; and that by extension, the solutions are straightforward and need not be complicated. However, 10 years of effort to reform electricity distribution by national government under the RED's initiative, amounted to nothing; and may very well have hastened the decline of the municipal distribution networks, as many investments were suspended during the negotiations. This demonstrated just how deeply entrenched this 110-year-old surplus practise has become; and the intention of the research is thus to provide an understanding of the immense complexities involved, which have far-reaching ramifications for local government, and which must be considered and appreciated in their entirety, if the necessary and long overdue reforms aimed at providing lasting solutions, are to have an increased chance of success. In this process, the thesis which focuses exclusively on South Africa, aims to make contributions to the fields of history, energy (electricity) studies, political economy, political science, policy development, public administration and governance.

## 1.6 Methodology and Associated Matters

### 1.6.1 Introduction

Neo-institutional theory is one of the primary theoretical perspectives which can be applied “*to understand organizational behaviour as situated in and influenced by other organizations and wider social forces*” (Lounsbury & Zhao, 2014). Within this operational environment an organization's main goal, in addition to succeeding economically, is to survive and gain legitimacy. Lounsbury and Zhao go on to confirm that the scope of the neo-institutional theory was expanded to consider the transformation and change of institutions.

Globally, the ESI value chain consists of three primary components - generation, transmission and distribution. Participation in this sector involves, amongst other things, aligning with national policy, regulatory compliance, financial sustainability, internal and external pressures, conflicting goals and competing demands. A distinguishing feature of the ESI in South Africa, however, is that even though all



three components have always been, and remain, government owned entities which, on the face of it, implies that strategic institutional change and reform is potentially less complicated and more readily attainable, this has not been the case. Indeed, the original institutional and operational framework for the ESI, and more specifically those governing MEU's, in South Africa remains largely intact since operations began over 120 years ago despite multiple calls for and attempts to reform the sector. The methodology described in the next section aims to achieve Lounsbury and Zhao's above stated objective to identify and understand the linkages and inter-relatedness of MEU's within the broader ESI.

## 1.6.2 Methodological Approach

South Africa is endowed with vast quantities of mineral resources; and its transition to an industrialised state, as Christie (1984) points out, was possible for three reasons: 1) The availability of large quantities of thick, shallow and unfaulted coal seams; 2) Laws which provided cheap black labour for the mines and power stations; and, 3) An ESI that was structured by government to specifically provide cheap energy for mines, transport and manufacturing. Christie goes on to state that although South Africa produced cheap electricity, this was never for the good of the people, but to serve the particular interests of the state and owners of property. And his study, which employs an historical approach (page 1), explores the political and economic history of South Africa from a neo-Marxist industrial economics perspective. Horwitz (1994) used a socioeconomic framework to trace the apartheid system, and its demise, through electricity. Rustomjee and Fine (1996) on the other hand, argued that the country's industrialization was driven almost exclusively by minerals and energy and their associated industries - the so-called Minerals Energy Complex (MEC) - to the extent that industrial policy for non-MEC manufacturing was largely limited to import substitution. Adopting a *"broader analytical framework"* (p7) which employs multiple theoretical approaches, they undertook a detailed historical analysis, via the prism of political economy, to demonstrate that economic development is dependent on the dynamics between linkages and agencies. Conradie and Messerschmidt (2000) provide a straightforward but detailed historical account of Eskom in evaluating the rationale behind major capital investment decisions by large utility companies, and Steyn (2001) used an economic institutional case study approach to compare the recently privatised ESI in England and Wales with Eskom. Marquard (2006) made use of *"three complementary approaches to understand and explain the development of South African energy policy"* (page 5), namely: policy networks; political influence on policy processes; and institutional and organisational influences. Baker (2014) in considering the political economy of energy transitions undertook a case study of South Africa making use of a socioeconomic approach. Finally, in undertaking a critical review on behalf of the National Treasury with regards the issues facing South African cities with respect to electricity, Eberhard made use of a conceptual framework.

Delivering a tome of historical facts and analysis, the above list constitutes some of the most prevalent research undertaken on South Africa's ESI. Except for the two most recent studies (Baker and Eberhard) two common threads bind them. Firstly, they all explore the development and linkages between mining and energy<sup>10</sup>; energy and the economy; and energy and politics, or more appropriately, apartheid and its legacy. Secondly, in delivering a detailed historical account (which they all do), the starting point is either the introduction of electricity into the country, or the formation of Escom shortly thereafter in 1922. Here,

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<sup>10</sup> Some studies consider all energy whereas others limit themselves to electricity, For purposes of simplicity the broader term of energy is used in this section.



this research aims to complement this series of literature by adding a new chapter – a detailed historical account of municipal ESI that considers the above-mentioned links between mining, energy, the economy and politics. Baker and Eberhard's research is relevant because they focus on the challenges facing the electricity distribution system in recent years and their research approach and outputs provides valuable insight for the case study of Johannesburg.

To contribute meaningfully to the above-mentioned literature, it is necessary for an overall picture to be painted. One which aligns and emphasizes their fundamental findings, namely that the apartheid project and the underlying structure of the country's mineral endowments almost singularly influenced all political decision making, with far reaching consequences which overshadow the country in present day 2019. Thus, without this broader consideration the bigger picture may be overlooked or even missed - a primary reason why the RED's reform process failed, as the research will show. Given this context the research on MEU's cannot be divorced from broader questions affecting the entire ESI. It follows then, that in order to deliver a historical account of how the political economy of the research subject evolved, a specific approach is necessary; one that is able to access and align with the research methodology used in the above studies.

The research has used three levels of analysis and two primary research tools. The analysis entailed: 1) The use of a conceptual framework to undertake a detailed analysis of decentralised local government; 2) Detailed historical tracing to identify critical junctures which are then examined to determine the events which gave rise to them, their consequences and the political linkages that have shaped municipal ESI; and 3) A case study of the Johannesburg MEU. The two primary research tools used are: 1) Concepts and typologies developed by historical institutionalism; and 2) Selected interviews to verify, complement and supplement research findings. Thus, in addressing the research questions, the above methodology aims to achieve the following:

- Firstly, to determine where the decisions which shaped the municipal ESI were made. It is likely that executive pronouncements did not emanate from the MEU's (technical) or intra local government, but were exerted from higher, more powerful, tiers of government. Accordingly, it is necessary to gain a detailed understanding of the institutional arrangements of relevant government institutions and how elites were able to exercise their will to give effect to their policy. Moreover, and of significant importance, it is necessary to understand how competing objectives played out. Which of these dominated and why? Satisfying this requirement, thus necessitates an approach which not only considers contributing factors, but which simultaneously identifies key inflection points, or critical junctures – the events that create path dependency and institutional lock-in, as detailed in Chapter 2. (This is intended to answer the first research question);
- Linked to, and a product of, the first research question, is a broader local government perspective on its obligations, and more pressingly, the high expectations placed on it by its elevation to a sphere of government in 1994. This is particularly necessary for the second research question; namely why a political solution could not be found between the spheres of government to reform municipal EDI, albeit that it was deemed necessary and overdue. And the impasse is even more confounding, given that most representatives from the two spheres were from the same political party – the African National Congress; and
- Surpluses from electricity sales operated by MEU's, have been a major contributor to local government finances since electricity was introduced to towns and used to cross subsidise other non-related municipal functions. And although in more recent times, many of the smaller towns now

operate at break-even or at a loss, this is not the case for the country's eight metropolitan municipalities, which consistently produce sizable surpluses, and are home to 40% of the country's population and continue to grow as people migrate in search of work opportunities (See Chapter 3.4.1). This study limits itself to the latter, as the bulk of the country's household, commercial and industrial consumers, reside in these areas. To fulfil research objective 2 and indeed the central theme of the research, a detailed historical study of municipal ESI is followed by a case study of Johannesburg, the country's largest MEU<sup>11</sup> in Chapter 7.

### 1.6.2 Primary and Secondary Research Sources

The thesis commences by gaining an international perspective of the fundamentals of decentralised local government. Using this as a foundation, the evolution of the South African national, municipal and local political landscape is presented, together with the development of the broader ESI and its association with mining, labour and politics. Up to this point, the thesis has relied mostly on secondary research, augmented where possible and appropriate, with primary sources. These take the form of government reports, source documents, financial accounts and the like. Also, semi-structured interviews to encourage open discussion, were conducted with:

- Author of the Thornhill Report (1990) which considered possible models for local government (Professor Thornhill);
- Former CEO of Merz McLellan, an engineering company whose relationship with South Africa's ESI dates back to the First World War, and continues to service the industry (Mr Frantz);
- Local government academics and sector specialists (Dr Siddle and Mr Solomon);
- Finance consultant to Treasury on electricity demand patterns in South African cities (Dr R Eberhard);

From here, as will be seen by the reader, in tackling the subject of the study – namely municipal ESI the thesis shifts to multiple and numerous primary resources. And in doing so the thesis has the following unique features: Firstly, although the South African electricity narrative has been told before from different perspectives (Eskom, national policy, politics and apartheid, mineral wealth), the research findings have shown that a consolidated municipal and AMEU account does not exist. Secondly, in addition to qualitative research practises of face-to-face interviews, published records and other secondary sources, the hunt for information has also led to the discovery of new and previously unconsidered primary material. In quantifying the type and number of primary sources accessed, Table 1-1 provides a conservative summary.

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<sup>11</sup> Johannesburg became, and has remained, the country's economic and financial hub from when gold was first discovered in the 1880s. (Chapter 4.6.5 provides an explanation of South Africa's municipal boundaries and governance structure). The Johannesburg MEU has always been the country's largest and at the epicentre of all major events which have affected municipal electricity supply, making it the most suitable candidate for the case study.

Table 1-1: Primary Research Sources

Type	Description	Total
AMEU Committee Meeting Minutes (1950 - 2017 <sup>12</sup> ). Minutes from meetings from 1917 to 1950 were not found, presumably lost	The meetings, held bi-annually (on average), covered all topics relevant to MEU's, such as: technical, economic, political, training, international events, finance, membership, challenges (copper and electricity theft) etc. Only a small portion of the minutes reported on the research topic but all were reviewed. Length of minutes varied between 5 to 10 pages, often with annexes – some of which were referenced but not included <sup>13</sup>	>140
AMEU Proceedings Journals (1915 – 2017)	The journals, printed for these bi-annual (and then annual) conferences, include discussion topics and peer reviewed papers. Although technical in nature, the subject of relief of rates and other policy decisions feature regularly. The index / content sections of all available journals were checked to identify papers of interest, which were then reviewed to ascertain their relevance	>40
City of Johannesburg Annual Report of the General Manager Electricity	The report was first produced in 1951 and provided a summary of events for the year under review. Typically, the report consisted of up to ten pages of reporting (text) and then twenty pages of tables, graphs and financial accounts. The reports were a rich and invaluable source of information. The reports were stopped in 1995 when the ANC took control of the municipality <sup>14</sup>	45
City of Johannesburg Annual Report and Financial Statements (1971 – 1995)	Published annually reporting on all municipal activities	14
City Power Annual Business Plan (2002 – 2017)	Introduced in 2002 as a reporting requirement, the reports each cover a 5-year period, aimed at tracking actual against targeted performance. The plan is dynamic in nature i.e: Five-year targets are often adjusted during their lifetime or removed altogether.	15
City Power Financial Statements (2002 – 2017)	Audited financial statements as required by the Municipal Financial Management Act	15
Merz McLellan <sup>15</sup> (MM) Internal Library	As British consulting engineers formed in 1902, MM played a pivotal role in the establishment and development of South Africa's national and municipal ESI – see Chapter 6.4.2. The company library contained reports and strategic plans	5
Other	National Treasury Provincial and Municipal Annual Reports; Government of South Africa Annual Books; Ministerial Publications, such as Green and White Papers, Strategy Documents and Action Plan	>15

There were also interviews with industry participants, who provided insights, “behind the scenes” perspectives and could confirm or dispel written accounts of events - such as, for example, the events surrounding Mr Leishman in the 1960s (Chapter 7.4), which were confirmed by Mr Bridgens, who started his apprenticeship at the Johannesburg MEU in 1958. Interviewees also provided unique information. In one such instance, Mr Frantz provided Mr Merz's 1930 handwritten briefing notes prepared for his trip to South Africa. The full interview<sup>16</sup> list is:

<sup>12</sup> Although the minutes of AMEU meetings over the more recent past (20 years) are readily available, with some published on the AMEU website. It is the minutes from 1950 until 1994 which provided great insight, as they were all but forgotten

<sup>13</sup> The minutes have been stored for many years and have not been accessed in decades. Invariably some pages and annexes are missing or damaged. Overall however, they proved to be a rich and reliable information source

<sup>14</sup> As per Mr Pomeroy, chief electrical engineer of Johannesburg MEU in 1995

<sup>15</sup> The company is now known as Mott McDonald

<sup>16</sup> Numerous attempts to multiple individuals at the National Energy Regulator (NERSA) were declined. Likewise, several researchers and academics whose work is used extensively were contacted but did not respond or declined. In total, 10 targeted interviews did not materialise.

1. Mr J Venter: AMEU Secretary since the 1980s - active pre and post democratic elections;
2. Mr S Bridgens: Johannesburg electricity undertaking employee 1958 to 2001 and chairman of the South Africa Institute of Electric Engineers 2007 to 2009;
3. Mr M Clarke: Johannesburg electricity undertaking employee 1958 to mid-1980s. Honorary member of the AMEU;
4. Mr M Pomeroy: Johannesburg electricity undertaking employee 1979 to 1996, when he resigned as Chief Electrical Engineer (CEO);
5. Dr W de Beer: Former CEO of Electricity Distribution Industry (EDI), a state-owned entity created to oversee municipal EDI reform;
6. Mr H Whitehead: Former head of Durban municipal electricity undertaking and AMEU chairman in the 1990s. Featured prominently during the RED's reform process representing local government;
7. Dr D Marais: Independent consultant contracted by City Power. Active during the research period;
8. Mr Q Green: Head of Business, City Power in 2017;
9. Mr L Pieterse: Head of Technical, City Power in 2017;
10. Mr P Vermeulen: Head of demand side management at City Power in 2016.

### 1.6.3 Research Challenges and Author Bias

Impediments to research covering a period of over 110 years - and which accesses meeting minutes, consulting reports, industry research journals and proceedings and the like - can be split into old (1-3) and (4) new:

1. **Availability and Accessibility:** Documents over time can be perceived to be of little value. Indeed, the AMEU minutes pre-1950 were lost, and those from 1950 only survived because the company appointed to manage the AMEU secretarial services has only changed once since then. The minutes themselves languished in a basement but were thankfully intact. And it is entirely possible that precious decades-old documents are in a cupboard, storeroom or government building, and may be unearthed, but similarly destroyed. Indeed, the United Municipal Executive ((UME) - the political equivalent of the AMEU), reconstituted and renamed as the South African Local Government Association (SALGA) after the democratic elections, is referenced regularly in the AMEU minutes. In speaking to SALGA to enquire about the existence and whereabouts of UME records, I was informed that when moving to their new building, most of the historical documents were discarded; presumably deemed to be surplus to requirements. Equally, as at 2015, no formal record-keeping which the public may access, has taken place since SALGA's formation;
2. **Completeness and Accuracy:** Not all documents survive and may have been missing from the start. For example, minutes or reports refer to a topic and then reference an attached document or annex for detail, which is not included. It was also the case that minutes for some meetings were missing. With no other sources to corroborate events information was pieced together through an exercise of identifying citations of the subject from previous and subsequent citations;
3. **One-sided Perspective:** The minutes and journals of the industry association (AMEU) reflect their position and interests. Unfortunately, as explained above, information that was as detailed as the AMEU minutes, and which provided an account of perspectives, from the UME, national and provincial government, and Eskom for example, was not found. However, the author can unequivocally state that the AMEU meeting minutes were found to be detailed and provided the inputs of all parties, consenting and contrary. Here, to the greatest extent possible, findings were corroborated through

interviews, conference proceedings and other reliable research sources to triangulate the findings; and

4. Current Reporting and Record Keeping: The issue of inadequate and sub-standard reporting in government institutions is regularly raised by the auditor general. And City Power's five-year business plans are a particular case in point. These detailed reports introduced in 2002 (up to 150 pages) were found to be repetitive, disjointed, using vague and opaque language, containing glaring and obvious errors, delivered in inconsistent format; and of greatest concern, changed or omitted reported statistics from year to year, without any explanation or recognition. Similarly, a clear deterioration in the quality of AMEU minutes has been experienced. The original secretary responsible for minutes (1950 to 1974) provided a detailed account of meetings, which included context, a discussion summary of various members' viewpoints and the final outcomes. From the 1990s however, minutes were reduced from ~10 pages down to 3-4 pages. Here again, the findings were enriched and triangulated primarily through interviews of members who sat in the meetings, as detailed in the list of interviewees

In many ways, knowing that the first three challenges are inherent in a historical study of this nature, influenced the methodology and framework adopted for the research. Here, in being warned (Van der Heijden 2014; Béland 2007; Bovens & Hart 1998) about the pitfalls of historical story-telling, the following approach was employed. Firstly, providing a detailed account and views of all stakeholders, allows the reader to gain a balanced perspective. The downside is that it lengthens the narrative, but this in my view is a necessary trade-off. Secondly, it is imperative to ensure that the order of facts is delivered accurately; as misrepresenting their sequence, consciously or through error, is likely to compromise the research findings. Thirdly, selective inclusion or exclusion produces the same negative outcomes as the previous point – inaccuracy – and is to be avoided at all cost. Adhering to these requirements has been a priority in my research practice, so as to eliminate to the greatest extent possible, any personal bias which may creep into this study.

Interviews were used to triangulate and test the accuracy of the research. Clearly this is very difficult to achieve for events that occurred over 30 years ago, let alone a century. However, it was possible to confirm information from as far back as the 1950s, as per the examples cited above. In an additional example, Mr Frantz, whose father was a local government councillor in Cape Town in the 1930s and 1940s, confirmed the political pressure placed on their MEU's colleagues to continually increase surpluses from electricity sales, as property taxes were unpopular with the electorate. Then, Professor Thornhill who helped shape the post-apartheid municipal structure, provided valuable insight; highlighting what was proposed, versus what was adopted, and why. Also, inconsistencies in the City Power annual reports were raised during interviews with its management, and clarifications were provided. Ultimately, to once again take further precaution against bias, interviewees were offered the opportunity to review the interpretation of their inputs and comments; and this right of reply is included at the end of the case study (Chapter 7.4.3).

Finally, the possibility exists that due to my involvement in the sector there is a risk regarding personal implicit bias. Here I would point out that my assignments are not directly related to the research topic and more importantly, I have never been contracted by City Power or any other municipal undertaking. The identification and selection of interviewees were an outcome of the research findings and this was not influenced by existing relationships, professional or otherwise. Indeed, I had never previously met or communicated with 14 of the 16 people interviewed (as listed above). By example, Professor Thornhill is

now at the University of Pretoria and I was granted an interview through his support staff; Mr Pomeroy on leaving the Johannesburg MEU started a new career and significant effort was required to track him down; Mr Solomon lives in London and consults in Africa; Mr Whitehead is retired and lives in Durban (600km from Johannesburg); Mr Green and Mr Pieters from City Power availed themselves through a formal research request. To the best of my knowledge, the author's involvement in an unrelated sector of the industry had no influence in facilitating the interviews nor did any of the interviewees respond in a manner that may have affected their answers or inputs

## 1.7 Structure of the Thesis

In meeting its objectives, the rationale for the structure of this thesis follows the views of historical institutionalism, which requires the identification of the original contingent event. As mentioned previously, electrification largely coincides with the discovery of minerals in South Africa. From this period until 1910 however, the analysis limits itself to contextual background and relevant information thereof; and there are two reasons for this. The first is that municipal electrification only started in earnest from 1910. The second, is that the formation of the Union of South Africa (in 1910) provides a convenient and conjunctive starting point for the examination of a united South Africa.

From Union onwards, three time periods have been identified, mostly because particular groups dominated the control of each period: From 1910 – 1948 the English-speaking population-controlled mines and the economy. In 1948 the nationalist Afrikaner-supported National Party (NP) won the elections, formalised apartheid and wrested significant control of the economy for Afrikaners. The NP ruled until the first democratic elections in 1994, when the African National Congress came into power and the third and final period began.

Figure 1-1 illustrates how just four political parties, and in reality, three, have dominated executive power in South Africa. This is relevant because common sense would dictate that during long periods of uncontested control, the removal of existing policies to introduce new ones would be significantly easier. Indeed, since 1910, in a period of 107 years, South Africa has only had 12 heads of state<sup>17</sup>, implying that on average each one has held their position for 9.5 years<sup>18</sup>. Furthermore, the transition from one period to the next, is characterised by a fundamental transfer of power and control from one cultural or race group to another. Under these circumstances, the opportunity for sweeping change to take place is not only probabilistic but expected (whether it materialises or not); and it is for this reason that the selected time periods are deemed appropriate.

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<sup>17</sup> This excludes President Ramaphosa who was elected State President in February 2018

<sup>18</sup> Excluding K Motlanthe, who was caretaker state president for 8 months in 2008/9, from the time T Mbeki resigned until national elections were held

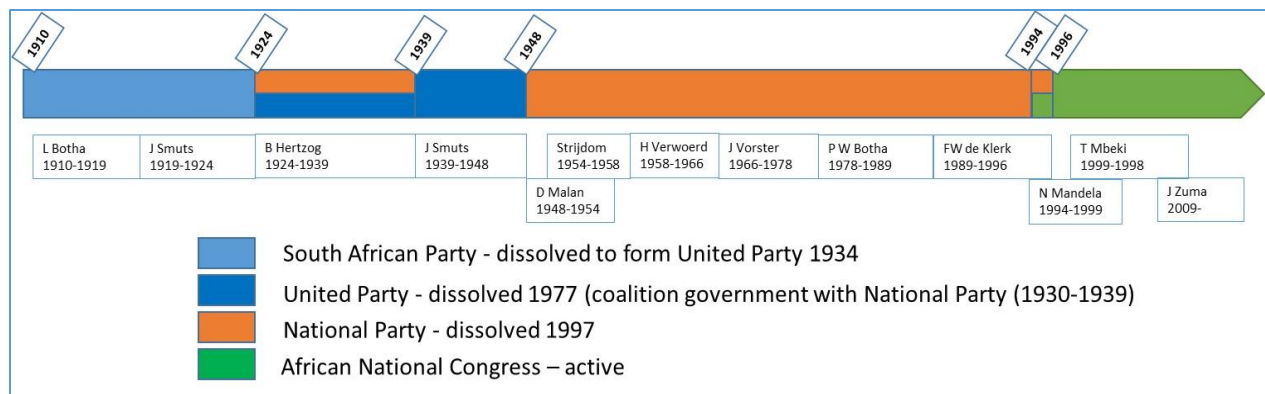


Figure 1-1: Political Parties Controlling South African Government since 1910

## 1.8 Content of Chapters

This study consists of eight chapters. The present chapter introduces the subject, contextualises the issues, provides a justification for the research, identifies the research objectives and the ensuing research questions, and explains the structure of the thesis. The next two chapters are largely theoretical and provide a conceptual foundation on which the chapters that follow are grounded, while the next four delve into the empirical research and the final chapter summarises and considers the research findings. Given the complex nature of the research topic a multiple framework approach was deemed most appropriate by making use of a theoretical and conceptual framework.

Chapter 2 develops the new-institutionalist theoretical framework, applied through historical institutionalism; commencing with a definition of institutions, and more specifically how political institutions relate to this research. An academic review of new-institutionalist literature is then undertaken and core terms and concepts explaining both institutional stability and change, are detailed. The final step in the development of the theoretical framework then expounds on the four approaches considered under new institutionalism, with historical institutionalism at the centre. Having substantiated the selected framework's appropriateness and examined how it should be applied, the chapter concludes with the research objectives and questions, and methodological approach.

Chapter 3 then advances the thesis by developing the conceptual framework of decentralized local government. It begins by exploring the linkages between politics and administration from a global perspective, followed by the differences between centralized and decentralised government. The chapter then evaluates mainstream international thinking on municipal funding models, which developed in conjunction with the push for decentralised local government that began in the 1980s.

Chapter 4 establishes the conceptual framework to track the evolution of the three tiers of government introduced in South Africa in 1910. Here, although the study's main concern is local government, the latter's intrinsic inter-connectedness with national and provincial government means that it cannot be analysed in isolation. Within this context, the research findings are delineated into the three time periods that have broadly defined South Africa's political power landscape since 1910: The dominance of the English-speaking *Randlords* following the formation of the Union of South Africa in 1910; the rise of Afrikaner nationalism and apartheid from 1948; and finally, the period under a democratically elected

government from 1994 to the present. Here particular attention is paid to the elevation of local government and its service delivery mandate, national government's policies to support local government, as well as the economic plans implemented to grow and transform the economy.

With the overall 3-tier of government context set, focus then falls on local government in Chapter 5. Here, a key success factor of decentralised local government is economic self-sufficiency; and this chapter provides a review of local government finances in SA post 1994 and examines how they have fared.

Chapter 6 then examines the political economy of South Africa from an electricity perspective - tracking the country's economic history under the three identified time periods and electricity's role in the country's development. Indeed, mining and its associated industries, on which the economy was built, is by its nature highly energy intensive, and mining companies made it clear that they expected an affordable and reliable supply from government. This has had tremendous impact on the evolution of electricity supply in South Africa and the priorities that it was based on and powered by.

Chapter 7 then provides denouement by bringing the various strands of a complex dynamic together and undertakes a detailed historical investigation into municipal electricity undertakings and their contributions to municipal finances, with Johannesburg the country's biggest city and economic centre as case study. Surpluses from electricity sales and the process of how they emanated, were applied and then became entrenched, are traced within this chapter. Here, while the period up to 1994 is covered in significant detail, the focus lies on the period post-1994, with particular attention paid to municipal EDI's role and contribution to the national electrification project, national government's attempts to reform the industry, as well as the negative impact of large tariff increases on municipal surpluses and their knock-on effects.

Chapter 8 provides a conclusion to, and summarises and evaluates, the research findings, while postulating potential ways that this research could be applied and taken further by future researchers and energy provision practitioners.



## 2. A Framework to Analyse the Enduring Nature of Decisions on the EDI made by Political Institutions

*“Politics is the art of looking for trouble, finding it whether it exists or not, diagnosing it incorrectly, and applying the wrong remedy.”*

Sir Ernest Benn

### 2.1 Introduction

South Africa’s recent electricity shortages have had a profound effect on South Africans and their economy. Structural reforms mooted in the late 1990s, failed. Had they not, it could possibly be argued that the crisis may have been avoided. But speculating on the road not travelled is not the subject here, in a study focused on the road well-travelled and why. On this road today, just as with ESI, local government too has been in the spotlight for all the wrong reasons. Service delivery protests are regular, often turning violent and destructive, with seemingly no area in the country spared. Continued auditor general findings of financial mismanagement and incompetence have been as consistent as they are regular. Indeed, the democratic era’s objective of municipal self-financing (especially the metropolitan and large cities) and decentralized local government has seen the opposite of the self-financing priority occur, with national transfers steadily increasing, rather than decreasing, with a parallel continued dependency on surpluses from electricity sales. In Johannesburg for example, the country’s biggest city and economic powerhouse, electricity surpluses accounted for more than 30% of total revenue (2009-2014), even though one in three units of the electricity purchased during the same period was lost to technical and non-technical losses.

These issues loom large in the everyday life of South Africans and have done for a long time. Significant political debate and academic research exists and continues to be generated on the importance of an independent and self-sufficient local government that is responsible for and capable of service delivery; the importance of a stable and affordable electricity supply, which for over a century has been the engine of the country’s energy intensive economy; and finally the need for a national government that is able to grow the economy and in so doing create jobs to reverse the gross inequality which currently persists. In 2015, at 0.63 the country’s GINI coefficient was one of the highest in the world<sup>19</sup>

But these issues are not new to the country. South Africa experienced regular power outages and high tariff increases in the late 1970s to fund Eskom’s overly ambitious continuous build programme, with calls for national government to intervene being largely ignored. Similarly, local government from as long ago as the 1930s complained that its revenue was insufficient for the municipal functions allocated to it by national government to be effectively and adequately delivered. In this, national government appointed several commissions of enquiry over the decades to investigate the veracity of such allegations, all of which resulted in little to no financial relief being afforded, either through additional taxing powers or greater national transfers; with no meaningful reduction in the responsibilities allocated. This situation was put under even greater pressure with the dawn of democracy, when municipalities were tasked with

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<sup>19</sup> In 2017 The World Bank reported that South Africa remains a dual economy with one of the highest inequality rates in the world, perpetuating both inequality and exclusion. According to Statistics South Africa, the GINI coefficient measuring relative wealth reached 0.65 in 2014 based on expenditure data (excluding taxes), and 0.69 based on income data (including salaries, wages, and social grants). The poorest 20% of the South African population consume less than 3% of total expenditure, while the wealthiest 20% consume 65%. <https://www.worldbank.org/en/country/southafrica/overview>

making up for over a century of almost complete neglect of their adjacent townships – underserved environments where black South Africans were forced to live under apartheid.

On the face of it, such challenges may only represent a specific period of insufficient prioritisation as other issues enjoy greater focus. For example, when the political will to act finally emerged in the mid-1980s, it was swift and seemingly effective. In truth however, it was not effective and the challenges were far beyond temporary, as the country found itself in a very similar situation just 20 years later - with this new crisis now persisting for over 10 years in 2018 and counting. Furthermore, at first glance the link between decentralized, democratic government and municipal ESI may seem tenuous at best. Here again the research will show that this is not the case – and that indeed its impact is as deep as it has been long-lasting. For example, the research has found that the concerns about the municipal practise of relief of rates were first raised in 1906 (Christie, 1984), and that the dire long-term consequences of the institutional arrangements to support this practise, predicted by the AMEU as early as the mid-1920s, were brushed aside by the political elite for reasons of political expediency and benefit, and continue to have an impact to this day. This raises the question as to why the warnings were ignored. Were they not sufficiently understood? Was it the case that the arrangements served a political purpose and their consequences amounted to an acceptable trade-off? Perhaps delays in dealing decisively with potential impacts meant that change became more complex with each passing year - leading to further postponement and leaving it for future administrations to address. Maybe changes made were not immediately evident. We cannot be sure, without deeply delving beyond particular periods into a more detailed, longer term narrative, because what is suggested by the research is that issues which existed from the genesis of municipal ESI, evolved in tandem with its development – thus implying that the interplay of factors that creates and embeds outcomes, occurs over the long term. The way to confirm this assertion then, would be through detailed and objective historical analysis which has the means to allow for the simultaneous study of politics, economics and organizational behaviour, and to furthermore assess how institutional structures, norms, behaviour and rules are able to influence or constrain the behaviour and actions of individuals over time. Indeed in seeking to demonstrate that history matters and that the current arrangements are the result of a long and well-trodden road, (making directional changes (reform) difficult), an approach that lends itself to such an endeavour is new-institutionalism, because it merges the study of formal institutional rules and structures with the actions of political actors. (Steinmo 2000; Thelen 1999; March & Olsen 2006; Steinmo 2008) The research thus makes use of new institutionalism, approached through the lens of historical institutionalism, which is “*best described as an approach to studying politics*” (Steinmo, 2008, pg 151) as its theoretical framework.

Before embarking on any analysis or explanation of the merits of institutionalism as a theoretical framework, it is necessary to first understand and define the meaning of institutions in general terms as a starting point for the chapter. This then leads to the next step of exploring the dynamics that exist between institutions and politics, and the differences between institutions and organisations. Then, with such building blocks in place, the section of this chapter that follows, deals with institutionalism as an appropriate approach – taking into account that institutionalism as a framework is itself evolving. Indeed, from old institutionalism came new-institutionalism, with North, March & Olsen being its authoritative scholars in the 1980s. Hall and Taylor then spoke of the three institutionalisms in the mid-1990s, rated on a scale between ‘calculus’ and ‘cultural’ (Hall & Taylor 1996, p.950), and by 2000 as many as seven had been identified (Rhodes et al. 2008, chap.4), with more to come as research evolves. Here, Hall and Taylor’s three primary institutionalisms – rational choice, historical and sociological, as well as a fourth

more recent addition (constructivist) – are evaluated to motivate why historical institutionalism was deemed the most appropriate. Also, the lexicon particular, but not necessarily exclusive, to historical institutionalism, is explored and explained; *inter alia*: path dependence, critical junctures, exogenous shocks, negative and positive feedback loops, drift and other terms. The paradox between path dependence, which implies a fixed and rigid path, and the inevitability of incremental change over long periods of time, is also explored, given that this dichotomy is probably the biggest criticism of historical institutionalism. Ultimately, by this section's end, the analysis will motivate why the theoretical framework of new-institutionalism, (focused through the lens of historical institutionalism) is appropriate; but this does not imply that the other approaches are in any way inferior or inappropriate – *"Institutionalism comes in many flavours, but they are all perspectives for understanding and improving political system"* (March & Olsen 2006, p.5).

The penultimate section of the chapter then considers Eskom's most recent fall from grace, which commenced in the mid-2000s and is still ongoing in 2018, because its impacts have shaken the entire country and national economy and have had a profound effect on municipal EDI (Chapter 6).

The chapter then concludes by articulating the methodological approach to be used to answer the research questions listed in the previous chapter.

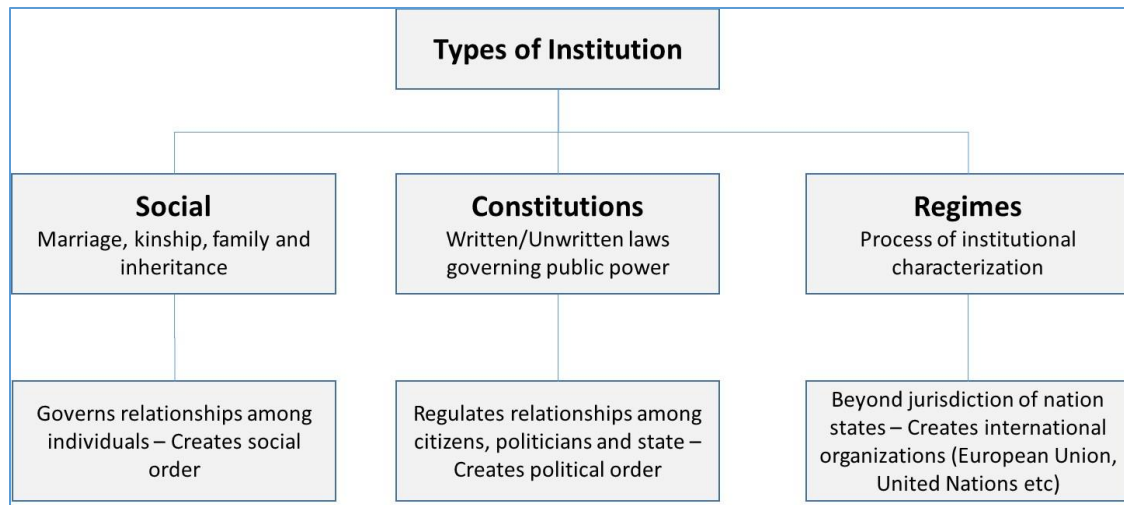
## 2.2 Institutions and Institutionalism

*Political institutions define the framework within which politics takes place*

March & Olsen (1989, 18)

### 2.2.1 Defining Institutions

At the most fundamental level, institutions are a human construct created to order political, social and cultural interaction; and why social sciences have defined "institutions" to be in opposition to "nature". On the one hand institutions can be used as instruments of dominant social control, but on the other can liberate humans from social bonds and nature. Elaborating further, Immergut (2011) states that institutions exist on a continuum of formality. At their most informal they are characterized by: habits-repetitive action of a self-conscious actor; customs - habits shared by a community; and conventions - agreed procedures, such as language. The defining factor for institutionalization is a move from the informal to the formal. Adherence to customs results in a shift to a more formal version of institutionalization, where societal norms have been accepted by the majority and now become more strongly binding – often represented by laws whose transgression is subject to punishment exercised by an authorized public institution. Furthermore, the workings of some institutions may rely on other institutions, and similarly may vary with regards to whether they are self-reinforcing, (where it is clear to the participants that it is in their self-interest to conform), or require meta-institutional intervention, which introduces the concepts of "rules of the game" and "appropriate" behaviour. Three types of institutions (Figure 2-1) are of significant relevance.



Source: Immergut (2011)

Figure 2-1: Types of Institutions

The “institutionalization” of something, such as an entity for example, may denote the frequency, stickiness or nature of a habit and the accession of allocating it the status of an institution. This extends to the degree to which habits, norms and knowledge are inculcated, indoctrinated or introduced by various means; creating rules, structures and standard operating procedures (March & Olsen, 2008) (Steinmo 2001). Taking this one step further, institution may then refer to the executing body or building. Individuals who have internalised the instructions of an institution in a dependable manner, then operate or staff these institutions and are expected to be trustworthy, such as doctors, army generals or government ministers. Betraying this position of trust should result in them being held accountable by the people they serve.

The confluence of institutions creates outputs, as shown in Figure 2-2. Institutionalism is the study of these institutional effects, and because institutions are seen as arbitrary, in the sense that they are a human construct which vary from nation to nation or may not exist at all, institutionalism must be a relativistic approach. For example, an institution that may have been the product of arbitrary results of a contingent event, may have unintended consequences for individuals, societies, politics and markets. *“Consequently, institutionalists view developments in these spheres as artefacts of institutions and, hence, neither natural nor necessarily desirable.”* (Immergut 2011, p.4)

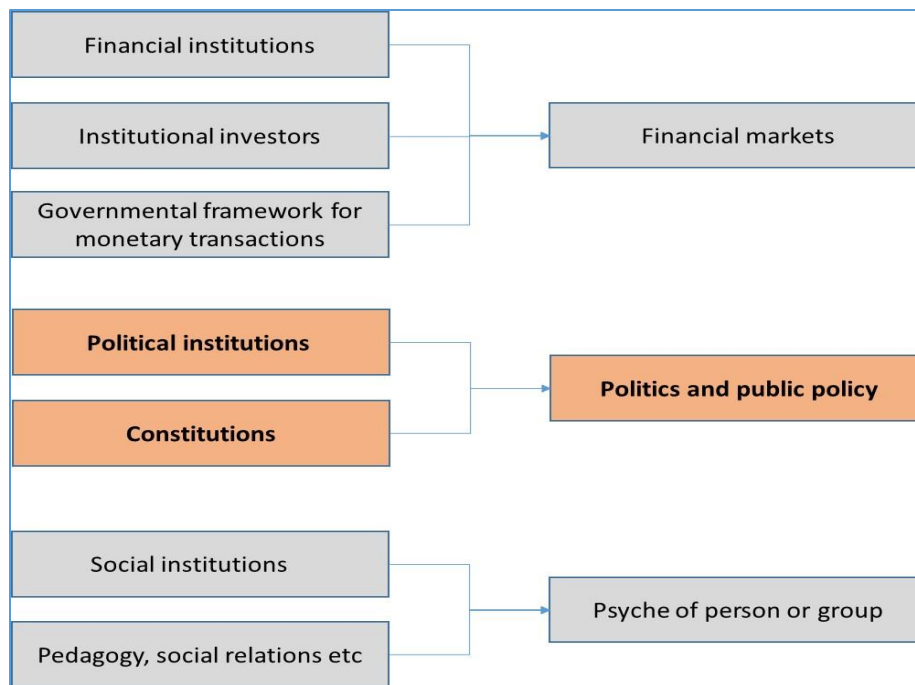


Figure 2-2: Outputs of Institutional Bodies

### 2.2.2 Politics and Institutions

Having examined the nature of institutions, the next step is to interrogate them in the context of the research. Steinmo (2000), in concurrence with Immergut's views, states that institutions at the broadest level are nothing more than rules; making them the foundation of all political behaviour. And although these rules may be formal (constitution) or informal (cultural norms), organized politics would not be possible without institutions. For Steinmo, institutions structure politics in three ways: 1) They determine who is able to participate in each political arena; 2) They shape the political strategies of the actors involved; and, 3) They influence what these political actors believe to be preferable and possible.

For March & Olsen (1989, p.16) politics is conspicuously influenced by the institutional structure in which it occurs. They astutely observe that the premise of organization is that not everything can be addressed at the same time, or as required, but that this is necessary for a comprehensive solution. This implies that a central anomaly of institutions is that any increase in capability will reduce comprehensiveness, meaning that at times, specific issues, participants, viewpoints or values, are suppressed or omitted. Bureaucratic and organizational literature contends that organizations simply follow rules, with the bulk of the behaviour resulting from pre-specified standard operating procedures. This too can be said of political institutions: reflected by routines, problem solving or use of discretionary powers; generally implemented without extensive analysis. However, it does not automatically follow that these rules are trivial, ill-conceived or unreasoned, as they are often the product of careful consideration and/or could reflect outcomes of cumulative experience, which may make them highly appropriate. March & Olsen define rules as:

*“... routines, procedures, conventions, roles, strategies, organizational forms and technologies around which political activity is constructed. This also includes beliefs, paradigms, codes, cultures and knowledge that surround, support, elaborate, and contradict those roles and routines.”*

As a result, action is based on identifying the symptoms and matching them to the appropriately prescribed rule, rather than evaluating the situation to identify and apply an approach that yields the best outcome for the institution or is even in the self-interest of the executing agent. Notably these routines are independent of the individual actors who execute them and endure over the *longue durée*. This results in them being relatively resilient to multiple staff turnover, to the personal preferences of personnel, to changes in political control and changes in the external environment. The multitude of routines undoubtedly makes political institutions appear to be bureaucratic, inflexible, unreasonable, insensitive and perhaps even thoughtless. But routines serve a purpose: They allow for consistency and simultaneous processes, provide certainty, help to avoid conflicts and clarify codes of meanings to interpret ambiguous situations, while representing individual and collective interests and reducing indecision.

Within this context, the concept of institutions undoubtedly dominates political analysis, but diverse views however exist across disciplines as to the kinds of rules and relations that are construed as institutions. This also applies to how political analysis is approached in the understanding of: 1) The nature of institutions and the setting in which political actors most typically act; 2) The processes that decode structures and rules into political impacts; and 3) The processes that decode human behaviour into structures and rules to create, maintain, transform or even end institutions.

In the context of this study, institutionalism implies the study of political institutions – theoretical ideas relating to the relations between institutional characteristics and political agency, performance and change. The endogenous nature and social construction of political institutions is emphasized by institutionalism, as a study of the rules and structures (detailed above), which exist within institutions, while exerting and creating a partly autonomous role. Institutions thus cannot be viewed simplistically as equilibrium contracts amongst self-seeking, scheming individuals or arenas for contending social forces (Bell 2002; Rhodes et al. 2008; Steinmo 2008; March & Olsen 1989; Goodin 1996).

As indicated, institutionalism has several approaches, which all provide perspectives for understanding and (hopefully) improving political systems. Here, before analysing the ‘old’ and transitioning to the ‘new’ institutionalism and the more dominant or popular approaches associated with it, the introduction of several concepts analysed by March & Olsen (1989) in their authoritative book on political institutions, is required. Indeed, these concepts have been specifically identified as primary themes of the research.

**Rule Following:** The principle of rules and rule following impacts greatly on institutions. Five elements are associated with this practice: Firstly, the logic of appropriateness is a fundamental reason of political actions. Actions are fitted to situations by their appropriateness within a conception of identity. Secondly, action – including politically important situations – is institutionalised through frameworks of routines and rules. Thirdly, rules are adapted to reflect historical experience, not the situation. Thus, it is the rules and not the experience that becomes accessible to individuals who were not present; and as a result the experiential justifications for rules become irretrievable. Fourthly, rules may bring order, but with this comes a likelihood of conflict, contradiction, ambiguity; and can produce either deviation or conformity,

variability or standardisation. Finally, rules must be sustained by trust and confidence if they are to endure; while the notion of trust has more to do with appropriateness than reciprocity.

Collectively these five elements demonstrate why the individual will of political actors becomes less important and why historical traditions, as recorded and enacted within a complex of rules, are often of greater significance. Seen in this light, a calculus of political costs and benefits is less important than identity and appropriateness; and expectations of the future are less predominant than learning as recorded in history, and dependent on routines and norms (ibid, page 37-38).

**Institutionalization and the Interpretation of Meaning:** Three features can be identified in the construction of meaning in political institutions. The first is how individuals within political institutions attribute meaning and value to their pasts and their futures. Secondly, the way in which they comprehend the world, becomes an enactment of that world. Finally, interpretation is not only an instrument of other processes such as decision making, but a central concern in its own right. Participants in political processes thus tend to exaggerate the reliability not only of historical data but of history itself. They overestimate the likelihood of events that actually occur and underestimate the likelihood of events that do not, but may easily have occurred; and exaggerate in hindsight their own foresight (ibid, page 39-40).

A key component of broadly accepted institutional meaning, is legitimacy. Political institutions, and the individuals who run them, need to demonstrate to their constituency that their decisions are legitimate. This is done if decisions achieve valued objectives or if the process followed is deemed appropriate and acceptable. Thus, good decision making is measured by valued qualities, such as information gathering and consulting relevant people, while acting decisively but prudently. Ultimately, the fact that legitimacy depends as much on appropriateness of intentions as it does on outcomes, means that processes become more effective in reinforcing values sequentially, rather than in articulating those values through action. Thus politicians act to assure their audience of three essential things: 1) That they have acted intelligently, and their decisions show analysis, planning and the systematic use of information; 2) Decisions made are sensitive to the concerns of relevant people and the concerns of the right people have been heard in the process, to assure that decisions and aspired intentions are relevant - independent of their implementation; 3) That the political system is controlled by its leadership; and appropriately so (ibid, page 49).

**Transforming Political Institutions:** Not all rules are necessarily good ones, and least of all those with indefinite lifespans within contexts of change. Good sense is also not guaranteed; and institutional transformation may require the toleration of extensive adjustment periods (to change), during which diverse, conflicting and inefficient solutions survive (North 1981, p.9). Indeed, some institutions develop a character that discourages arbitrary structural changes or significant change, rather than fluidly adapting to their environment. Indeed, secure monopolies, be they in the public or private sector, simply do not have to improve to survive (North 1993, p.2). Added to this, is the risk averse nature of human beings and how they respond to deteriorating circumstances. Here Weyland (2008, p.286) cites prospect theory (human decision making biases) in his explanation of actors who are more likely to persist with existing sub-optimal institutional circumstances - adopting *bold, counter-measures* to avoid a sure, but limited, loss, rather than pursue the uncertain and unknown risks of change - but in so doing, risk far greater deterioration. Thus, institutions preserve themselves in part by being resistant to many forms of change and partly by forming their criteria of appropriateness and success, resource distributions, and

constitutional rules. Routines are maintained because they are embedded in a structure of routines, by socialization and the way in which they organize attention. The manner in which meaning is developed provides order and stability, and is sustained by social pressure and education (North 1981, p.54).

**Institutional Reform as Public Policy:** On the topic of decentralization, March & Olsen noted that demands for institutional reform began to grow in the 1980s, with administrative institutions being viewed as too complex, centralized, sectorized, inflexible and difficult to influence. They were too distant from their constituents and had become inefficient and ineffective. Many called for greater decentralization and the prioritisation of national interests, which were being marginalized by major but narrow, highly organized and well-funded interest groups (ibid, page 97).

**Preferences, Power and Democratic Institutions:** Political science and economic theory tends to define the challenge of politics as one of aggregating prior and exogenous individual preferences into a collective choice – through bargaining, coalition formation, and the exercise of power. Under such a constricted conception of politics, the result is an incomplete understanding of power in a democracy, and consequently, an incomplete specification of the problem involved in designing democratic institutions (ibid, page 157).

**The Role of Political Institutions:** Under March & Olsen's definition of institutional analysis, political actors are driven by institutional duties and roles, as well as calculated self-interest; while politics is organised around the construction and interpretation of meaning, as well as of choice; and routines, rules and forms evolve through history-dependent processes, which do not reliably and quickly reach unique equilibria. Concurrently, the institutions of politics are not simple echoes of social forces and the polity is something different from, or more than, an arena for competition among rival institutions. In short, the organisation of political life makes a difference, and institutions affect the flow of history.

Politics is organised by a logic of appropriateness. Political institutions are collections of interrelated rules and routines, which define appropriate actions in terms of relations between roles and situations. The process involves determining what the situation is, what role is being fulfilled, and what the obligations are of that role in that situation. When individuals enter an institution, they try to discover and are taught the rules. When they encounter a new situation, they try to associate it with a situation for which rules already exist. Through a logic of appropriateness, political institutions realise both order, stability and predictability on the one hand, and flexibility and adaptiveness on the other. In a logic of appropriateness, behaviours, beliefs and actions are intentional but wilful. They involve fulfilling the obligations of a role in a situation. Action stems from a conception of necessity, rather than preference. Ambiguity of conflict in rules is typically resolved, not by shifting to a logic of consequentiality and rational calculation, but by clarifying the rules – what the situation is and which definition fits. A tension exists between the logic of appropriateness and the logic of consequentiality, which need not exist. Thus, typical characteristics in political institutions are the *healthy charade* and *contributory hypocrisy*, in which reasons and actions are not tightly linked, but place pressure on each other in a way that strengthens each.

Ultimately, political outcomes are a function of three factors: 1) The distribution of preferences (interests) among political actors; 2) The distribution of resources (powers); and, 3) The constraints imposed by the rules of the game (constitutions) (ibid, page 158-163).



### 2.2.3 Distinguishing between Institutions and Organizations

For the purposes of this research, it is important to differentiate between institutions and organisations. In drawing a conceptual distinction between the two in greater detail, North (1993, p.1) explains it thus: *“Institutions are the rules of the games and organizations are the players. The interaction between the two shapes institutional change.”* Here North’s definition of institutions aligns with the one provided in Chapter 2.2.1 – formal and informal rules which have been developed by humans to constrain human actions. These constraints, coupled with standard economic constraints, define the opportunity set in the economy. Organizations on the other hand, are groups of individuals bound together by a common cause, which can be economic, political or social. For North, the types of organizations formed is determined by the institutional matrix; but once formed, organizations have the ability to induce institutional change by altering the rules themselves or influencing the effectiveness of enforcement. Similarly, for Khalil (1995), institutions embody formal and informal constraints, while organizations are agents. Khalil’s analysis of the two concludes that although the two are inter-related they are mutually exclusive, and that there is *“no one-to-one correspondence between the set of institutions and the performance of organization”* (ibid, page 446). He quotes Eggertson – *“similar rules can create different behaviours and outcomes.”* Thus, what becomes important is the analysis of the behaviour and response of the organization, in addition to the structure of institutions and by implication the “correct” structure for a desired outcome. Success or failure of organizations is not simply the result of the “correct” mix of laws and regulations.

In contrast, two highly regarded academics interviewed on the topic, held a divergent viewpoint (March and Friedberg, 2011). For them, too much has been made of the distinction between institutions and organizations. For March, an institution is a collection of rules and organizations are instruments to act within these rules. Thus, he does not see a stark difference between the two: *“Suppose I make a distinction, what difference does it make?”* Friedberg concurred with this view, noting that the high level of interaction between the two, naturally results in them influencing each other at various levels. The primary distinction for March is that both change over time, but institutions do so at a much slower rate than organizations, and it is this difference in the rate of change between the two, which has consequences (ibid, page 240).

The research proceeds on the basis that organizations can be economic, social or political in nature (North) and that essentially as per March and Arellano institutions and organizations are inextricably linked.

## 2.3 New Institutionalism

Institutions, as has been explained, are set up to create certainty, reduce transactions costs and improve operational efficiency and/or cooperation - for the primary purpose of achieving outcomes valued by society (North 1990, 3–9). Whereas social science concerns itself with the broader impact of institutions in human society and social relationships, political science has focused on power and institutions. For Bell (2002) this is attributed to the following: Institutions constitute a very large part of the political landscape, with governance occurring in and through institutions; institutional actors wield power and are able to mobilize institutional resources in political battles and governance relationships; and institutions shape and constrain political behaviour. But as Williams (2012, p.48) points out, once established and stable, they are also able to endure past the point of usefulness.

Traditionally, political science was a relatively straightforward study of political institutions, focused on the formal legal arrangements that it described and mapped. Under this field of research, (referred to now as old institutionalism), behaviour was a direct consequence of *the rules* in place, of how these rules came about in the first place and whether the rules delivered on behalf of the common good. The emphasis was on description, with little attention paid to analysis and theory building (Bell 2002; Rhodes et al. 2008; Immergut 2011).

The progression of political science saw it move away from history, law, and philosophy, to entrench itself in economics, sociology, anthropology, social and cognitive psychology. The focus now fell on behaviour, because it was noted that people within institutions did not always follow rules, and there were questions as to why certain informal groups of individuals became more dominant than the formal structure they found themselves in. The political behaviour movement of the 1950s, whose emphasis was on observable behaviour, was then bolstered by technology improvements. These provided a new and efficient means for mass surveys, shifting the research approach to a quantitative explanation and comprehension of the political environment, now made possible by the technological means for executing large quantitative studies. These developments brought renewed interest and scholarship to the study of political science under new institutionalism, and consequentially a vast array of approaches emerged - to the extent of incongruence (March & Olsen 2006 Preface) (Immergut 1998, p.6) (Williams 2012, p.48). Immergut is clear that although observable behaviour was the point of departure for new institutionalism, institutionalists *"vehemently reject observed behaviour as the basic datum of political behaviour"*; and indeed that observed behaviour is insufficient for the purposes of explaining *"all the phenomena of government"*, because behaviour occurs in the context of institutions and can only be so understood; while individuals from different backgrounds will interpret the same evidence differently (North 1993). Or that, as per Hall & Taylor (1996, p.936), institutions play a role in the determination of social and political outcomes. March & Olsen (2006, p.4), who are sociological new institutionalists and promote a logic of appropriateness over that of consequence (where political actors are empowered and constrained to act within the prescriptive rules of the institution with which they identify, and therefore fulfil these rules rather than consider the consequences) state that institutions are a relatively enduring collection of rules and organized practises, and as such (Steinmo 2000) they are the foundation of all political behaviour. A key objective of new institutionalist analysis is to understand and explain why actors choose a particular definition of their interest and not an equally plausible alternative (Immergut 1998, p.7). New institutionalism tries though to avoid unfeasible assumptions, which require too much of political actors in terms of normative commitments (virtue), cognitive abilities (bounded rationality) and social control (capability) (March & Olsen 2006, p.16).

The theory of new institutionalism has three primary approaches or perspectives: sociological, rational choice and historical. Several others exist, such as discursive and network institutionalism. Here, all approaches help in understanding and improving political systems (March & Olsen, 2005, pg 5), but each embodies its own unique set of strengths and weaknesses. The basic similarity in all perspectives is that something identified at a higher level is used to explain processes and outcomes at a lower level of analysis (Amenta & Ramsey 2010, p.15); therefore the paradigm and its approaches is deductive and allows researchers to conduct theory testing as a methodology. An analysis by Hall & Taylor (1996, p.950) on the three approaches, places them on an extended scale between *calculus and cultural*.

The three different approaches are now explored, with historical institutionalism considered last and in detail.

### 2.3.1 Rational Choice Institutionalism

Developed at the same time as, but independent of historical institutionalism, rational choice institutionalism arose from the study of American congressional behaviour. From a rational choice perspective, congressional outcomes are not expected to produce stable majorities and should demonstrate a high level of cycling, as new majorities seek to overturn their predecessor's bills. In reality the reverse has been true. Once enacted, legislation remains resilient and endures. Rational choice institutionalism sought to explain this discrepancy and was premised on the basis that institutions are used by actors to maximise their utility. Existing neo-economic tools (transaction-cost economics, property rights, rent seeking, bounded rationality and behavioural economics) were adopted to develop an approach to explain how institutions are created, how political actors behave, and the consequences of their interactions (Rhodes et al. 2008; Immergut 1998; Hall & Taylor 1996).

Hall & Taylor (1996, p.945) identify four notable features. Firstly, actors have a fixed set of preferences, dedicating extensive effort and planning in their attainment. Secondly, in seeking to maximise utility, actors tend to produce sub-optimal outcomes for the collective. Typically, this is because mechanisms within institutions do not guarantee the complementary behaviour of others. The prisoner's dilemma<sup>20</sup> is an apt example. Thirdly, actors are motivated by strategic calculus, which is based on how their counterparts are likely to behave. In setting the "rules of the game", defining the boundaries and the sequence of activities, political actors are able to influence outcomes by limiting the options of their counterparts. This strategic interaction, or calculus approach, influences policy outcomes. Fourthly, rational choice institutionalists explain how institutions originate. The starting point is specifying the functions the institution serves and the benefit the institution provides to those who created it; and that the organization is sustained by the voluntary agreements of the relevant actors; and survives because it provides greater benefits to the dominant actors than other institutional forms.

In short, rational choice institutionalism focuses on social utility and the self-interest of actors. Their motivating forces are characterised by short-term planning and decision-making, but kept in check by the strict formal procedures and written rules of their institutions (Kaarlejarvi 2003, p.10).

In accounting for change, rational choice institutionalists have varied views. The approach holds that institutions represent an equilibrium state, and once this preferred state is attained, the institutional founders seek to lock-in rules and choices to maintain this state (negative feedback loop); but that this is not always possible. Douglass North, a founding father of new institutionalism, is of the view that the constant interaction between institutions and organizations creates competition. This competition forces investment in skills and knowledge, which in turn improves the efficiency of the organization. This ultimately causes prices to change, forcing a re-negotiation of the terms of participation and in turn a change in institutional rules and enforcement procedures. Although punctuated equilibrium is a possibility, actors avoid it as it threatens existing vested interests, and is most likely to occur when competing organizations are in a state of gridlock. Thus, change is incremental, path dependent and

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<sup>20</sup> The prisoner's dilemma is a standard example of a game analysed in game theory that shows why two completely "rational" individuals might not cooperate, even if it appears that it is in their best interests to do so.

subject to the rate and extent at which competition amongst organizations leads to investments in skills and knowledge; where: “*path dependency could mean nothing more than that yesterday’s choices are the initial starting point for today’s*” (North 1993, p.4). With political organizations being far more prone to inefficiency, transaction costs are usually higher and change slower, while polity can, and often does, frustrate private enterprise through perverse incentives. Margaret Levi though, begs to differ. For her, change is most likely when simultaneous events of individuals seeking change can increase their effectiveness, while the blocking powers of individuals whose interests are served, are reduced. Finally, Pollack believes that change emanates for one of three reasons: A change in the policy environment; a change in the actors; or an improvement in the quality of information. Any one of these events may open a policy window, which creates the necessary conditions for a conscious and deliberate move for change. In summary, change for rational institutionalists, is faster and more deliberate (Gorges 2001; North 1993; North 1971).

### 2.3.2 Sociological (Normative) Institutionalism

With rational choice providing the *calculus*, on the other end of Hall and Taylor’s scale lies *culture*, represented by sociological institutionalism which regards institutions in much broader terms. In addition to the formal rules, norms and procedures inherent in institutions, there are also informal (unwritten) rules, practises and moral judgements, in which political struggles are played out (Eriksson 2011, p.13). Institutions are socially constructed, and as they evolve, they embody a common understanding of the world. This means that even when policy makers seek to change or redesign institutions, they are inhibited by these embedded cultural constraints (Thelen, 1999, pg. 386).

Sociological institutionalism is a response to the rational choice theory that ascribes the primary motive of political behaviour as self-interest, which they critique on three fronts: In the first instance, sociological institutionalists have noted that actual outcomes display correspondence, despite political actors having different relevant interests. Secondly, the clear pursuit of interests is often not possible, given the link between reality and policy instruments. Finally, interest-driven theories trivialise the role that culture plays in a political environment (Amenta & Ramsey 2010, p.17). Sociological institutionalists point to the way education ministries develop in a similar manner in different countries, albeit that local conditions are vastly different, or how private firms do the same across industrial sectors, regardless of the product.

Hall & Taylor (1996, p.945) identify key features distinguishing it from other forms of institutionalism: 1) In addition to the formal rules, procedures and norms, the definition of institution is expanded to include culture, by considering morals, symbols and cognitive scripts; 2) Individuals who enter an institution internalise the norms, which in turn affects their behaviour. Individuals act not simply because of how they believe they should act, but also how they perceive or imagine they should act in a given situation. This is not to say they are not goal-oriented or rational, but rather do so in socially appropriate ways; and 3) Change is introduced not necessarily because it advances institutions’ efficiency or their interest, but because it enhances the social legitimacy of these institutions.

### 2.3.3 Historical Institutionalism

*“Those who ignore history are doomed to repeat it.”*

[This quote is most widely attributed to George Santayana (1863 – 1952)]

#### Origins and Features

This framework, whose key tenet is path dependence, was developed in the 1970s by theorists who wanted to go beyond the offerings of structuralism and group theory of politics, which dominated political science thinking at the time. It also sought a plausible understanding and explanation as to why political institutions, after long periods of stability, were struggling to adapt to social changes arising in the 1960s and 1970s. For historical institutionalists, it was the institutional organization of the polity or political economy, which influenced behaviour and distinctive outcomes. More especially for these researchers, the state warranted greater scrutiny as it ceased to be a neutral broker among competing interests, but a myriad of institutions able to structure the outcomes of group conflict. Thus, analysing these complex relationships, where political antagonism and competition took place, led to cross-national comparisons of public policy – focusing on the relationship between national political institutions and legislators, organized interests, the electorate and judiciary – in order to gain a deep and contextualised understanding of the politics (Hall & Taylor 1996, p.937). Historical institutionalists pay particular attention to the rule structures embedded in political organizations, made up of formal and informal procedures, routines, and norms (Béland 2010). In their approach, historical institutionalists are first interested in explaining an outcome; and only then do they attempt to understand and articulate alternative explanations for the observed outcomes (Steinmo 2000). This is because historical institutionalists recognise that institutions are socially constructed, and that as they evolve, they embody a common understanding of the world. This means that even when policy makers seek to change or redesign institutions, embedded cultural constraints may stand in the way (Thelen 1999, p.386). Historical institutionalism considers how institutions and their impacts have evolved over time (Hall & Taylor 1996, p.937); such as why a certain choice was made and/or why a certain outcome occurred, which in all likelihood is best understood as both a product of rule following and interest maximising (Steinmo 2008, p.126), and thus draws from the rational and sociological perspectives. This means that historical institutionalism has divergent approaches and applications, all of which are based on the concept of path dependency. For Pierson (2000a, p.251), the notion of path dependency implies that: specific patterns of timing and sequence matter; large consequences may result from relatively ‘small’ or contingent events; actors take action that reinforces stickiness in maintaining the status quo, so as to entrench vested interests; particular courses of action, once introduced, may be impossible to reverse; and political development often has key juncture points. Thus,

*“(Institutions are) sticky and rigid structures, which lock in actors into a certain policy path.”*

Eriksson (2011, p.15)

The implication of institutional development over time, is that political actors are more likely to adapt existing frameworks and policies, rather than amend or discard them. In so doing, they create and strengthen a path dependent trajectory; the origins of which may stem from a crisis, social pressures or a random unanticipated convergence of events. Citing Sanders’ example of the development of railroad regulation by an independent commission (Rhodes et al. 2008, p.39), we see a chosen trajectory being

steadily entrenched by all participants (transportation businesses, investors, trade unions, legislative and party politics), who benefitted from the increasing returns of this path. Rather than experiment with different approaches to decrease social costs and control participation, the original path of the railroad commission became more entrenched and its connection to society even more elaborate to support this; resulting in “intransigent resilience” that endured for a long time and aided road transportation’s ascendancy. Ultimately, the large amount of vested interests at stake in this *path*, resulted in all participants defending it at the expense of the national interest. Thus ...

*“To understand the actions of all these political players, one must take cognisance of the historical development of the institution, and the original, distinct culture and problems in which it arose. That is the central logic of HI, and to its practitioners the advantage of studying politics in this way is understood and non-controversial.”* (Sanders in Rhodes et al. 2008, p.40)

Hall & Taylor (1996, 938–944) identify four distinct features of historical institutionalism which set it apart from other institutionalist approaches. The first is that the relationship between political institutions and the behaviour of individual political actors is analysed in relatively broad terms. The second is emphasis on the asymmetry of power amongst institutions. Rather than assume a situation where power is equally distributed, they recognise disproportionate access to the decision-making process, meaning that some lose while others win. Thirdly, as already elaborated above, the concepts of path dependence and unintended consequence are stressed. Finally, outcomes are not solely limited to events within institutions, with strong recognition that external ideas and beliefs can influence events.

### Historical Compared to Rational Choice Institutionalism

An explanation of the primary differences between rational choice institutionalism, to which historical institutionalism is most closely aligned, is useful. It is true that rational choice and historical institutionalists share the same starting point “(of institutions being the) *rules of the game in a society, or more formally, are the humanly devised constraints that shape human interactions*” (North 1990) and that the two approaches overlap in many other ways. Indeed, institutions are the focal point of both approaches because they structure political behaviour. Historical institutionalists do not dispute that political actors act rationally most of the time and likewise rationalists concede that not all action is exclusively motivated by self-interest. The key difference lies in their approach to the science of politics. Historical institutionalists’ chief interest is in understanding and explaining real world long-term political evolution and outcomes, whereas rationalists focus on specific events which are put under the microscope (Rhodes et al. 2008; Steinmo 2000). Rational choice is: “*founded on abstraction, simplification, analytical rigor, and an insistence on clean lines of analysis from basic axioms*” (Shepsle in Rhodes et al. 2008), whereas historical institutionalism focuses on dense fact-based description and logical reasoning. Quoting Pierson, Sanders (Rhodes et al. 2008, p.43) concludes that rationalists take preferences for granted, whereas historical institutionalists concern themselves with how these preferences were generated in the first place, and how and why they evolved over time. For Steinmo (2000), rationalists try to understand the game and how it is played. Historical institutionalists, however, are interested in determining who wins, who loses and why. These approaches in analysing institutionalism should not in any way be viewed as mutually incompatible. Opting for one over another can very well be based on personal choice or temperament, and although differences remain, Thelen (1999, p.370) believes that the walls dividing the various perspectives of new institutionalism have been eroded by border crossers. They have opted not

to isolate or restrict themselves to one approach, but rather to borrow liberally from each, where appropriate in answering specific empirical questions. In other words, there are more points of tangency than typically assumed. A caveat is raised by Pollack (2009, p.142), who investigated European Union integration. While recognising the strengths and benefits of both these branches, he also notes a major potential weakness: They both focus on the effect of institutions as intervening variables and do not provide a theory, making them mid-level theories. They are however very useful in tracking policy pathways, and how institutional traditions and cultures impact the development of policy (DuPont 2013, p.89).

Ultimately, the long-term nature of studies founded in historical institutionalism, naturally lead to the examination of the interplay of various factors over an extended period, as well as of key moments or events within these extended periods that had particular long-term impact. This makes further understanding of the concepts of path dependency and critical junctures, critical to this study, which will now be explored in the section below.

### Path Dependency and Critical Junctures

Emerging in the 1960s from the trend of social science researchers now noting the enduring effects of historical decisions, the development of path dependent theories began to grow. Common consensus on application of the term has been less straightforward however (Williams 2012, p.60). In this regard, arguably, the most accessible and widely referenced definition was provided by Levi (1997) *“Path dependence has to mean ... that once a country or region has started down a track, the costs of reversal are very high.”* Pierson (2000a, p.252) then distinguishes between narrow and broad definitions, pointing out that exiting a particular path need not be difficult, but rather that before one can understand the significance of the current state, the path taken must be understood.

At the most basic level, three outcomes exist in self-reinforcing path dependency, where initial actions put users on a path of increasing returns that may endure for decades and/or can only be exited at a cost (Mahoney 2000). In first-degree path dependency, the initial choice to pursue a certain direction may have been innocuous or considered, but is ultimately optimal, although not necessarily uniquely optimal. Second-degree path dependence occurs when a decision is made based on imperfect information, which was not known or understood at the time. The result is regrettable and has a costly outcome. Third-degree path dependence mimics the second type, with the difference that it should have, or could have, been known from the start that the results would be sub-optimal. That in other words, the error was avoidable (Liebowitz & Margolis 1995). But the authors conclude that although interesting, the theory is incomplete, because it assumes that once the error is identified as of sufficient magnitude to take corrective action, this will then be done. Although this may very well be the case in the private sector where a company either corrects or becomes insolvent, it is however slightly more complex in public institutions, which often endure regardless. Mahoney (2000, 512) acknowledges that although path dependency is more closely associated to technology development or industry location, it can be applied to political institutions because they cannot be changed instantaneously or easily. Similarly, Thelen (1999, 386), although having a slightly different take, believes that political institutions are able to adapt, and that for those who are disadvantaged by prevailing conditions, the endurance of political institutions means that they can bide their time, because future choice points exist. Thus, increasing returns in politics do not necessarily imply irrevocable lock in equilibrium.



In taking these arguments further, a distinction needs to be made between technological and institutional path dependence, and how technological progress can impose change i.e. become the proverbial game changer. Arthur (1989) notes that technological advances (ergo embraced change) lead to the phenomenon of increasing returns, and by extension, path dependency. This means that the more that a specific technology is adopted by the market, the greater the experience that is gained and the more the technology will be improved – creating a combination of factors that will result in market dominance and *lock-in*. North agrees that path dependence allows for the equal analysis of technological and institutional change, because increasing returns are the key to path dependence in both cases. For institutional change however, progression is more complex because of the role played by political organizations in the process, whose more subjective nature – possibly driven by political objectives that may supersede merely the need for operational effectiveness – thus makes them less efficient. And while technological change is undoubtedly a source of economic growth, and certainly a driver of the economy, the progression of institutional arrangements can also equally produce more efficient markets and in turn result in growth. This though requires competition to exist, in the overall economic setting, between institutions and organizations, as only then will increased investments be made in skills and knowledge, which will bring about both institutional and technological change. Ultimately, as this research will show, such a competitive context was unfortunately lacking in the one-sided power dynamics of South African ESI. Local MEU's were hamstrung by regulations which limited their reach, whereas Eskom was encouraged to invest in technology and skill, knowing it would not face any competition for new markets; with such a lack of healthy competitive friction ultimately leading to a bloated, monolithic and inefficient utility (North 1990; North 1993; Fuandez 2016).

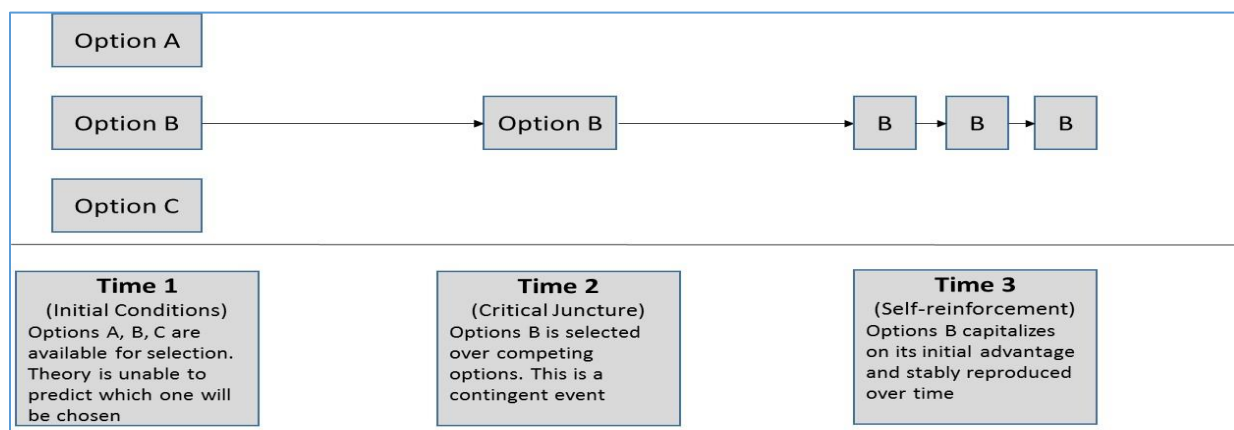
In response to criticism that path dependency often just comprises vague notions of *history matters* and that *the past influences the future*, which may identify the original cause of change where sequenced variables are considered, it is thus important to also take path dependent processes of change into account. It is therefore necessary to not only trace events back to the original historical events, but to demonstrate that these were contingent and not based on prior historical events. Analysing such path dependent sequences in detail, then provides an explanation as to why and how certain events unfolded and whether outcomes aligned with theory or diverged from it. Two dominant sequences exist. The first, is that of *self-reinforcing* events that exhibit traits of increasing returns, which as the name implies, continue to provide benefits; making it harder to transform or opt for previously available alternatives, even if these would have been more efficient for the institution. This process is also referred to as self-reinforcing or a positive feedback process, and *stickiness* by historical institutionalists. Understanding the mechanisms that replicate this behaviour is crucial as a means of identifying ways to reverse or exit the path. The second, considers *reactive sequences*, which are chronologically successive and connected events. To qualify as path dependent, the original event must have properties of contingency and must be marked by process of *inherent sequentiality*. The early event unleashes subsequent development, not through reproduction, but by setting off a series of tightly linked reactions and counter-reactions i.e. ones that move the system in a new direction, without necessarily reinforcing the first move.

**Self-Reinforcing Sequences - Identifying the Starting Point: Critical Junctures, Contingency and Counterfactual Analysis:** Sceptics of historical institutionalism are quick to state that if one goes back far enough, one will undoubtedly find a point in time where choices made cannot be predicted or explained by theory i.e: initial choices and outcomes are stochastic (Mahoney 2000, 537). Thus, for path dependency analysis to be credible, it is vital that the starting point is appropriate and that the sequencing and timing



of events is considered. As Williams (2012) explains “...not only does history matter, but certain events in history wield disproportionate influence on the modern structure of the institution.” Indeed, this recognition led to the development of the concept of ‘critical junctures’ - windows of opportunity where decisions taken will affect outcomes over the long term, and by implication, complicate and frustrate change. Mahoney (2000) suggests that for reactive sequences, this should be the period just before a critical juncture, where different options are available – with the process demonstrated in Figure 2-3. Indeed, identifying critical junctures allows for meaningful counterfactual analysis<sup>21</sup>, because available and plausible alternatives can be considered (Options A or C), rather than relying on hypothetical ‘what if’ scenarios. Here, the research’s starting point, the genesis of electricity generation in South Africa in the late 1800’s, is appropriate and credible. Not only is it a natural starting point but there is sufficient reliable, primary and secondary research, sources to identify and track the sequencing and timing of influential events - specifically the Power Commission Study (1909) which informed the Transvaal Power Act (1910) and laid the foundation for the creation of Escom in 1922 (Chapter 6.4.2)

It should however be noted, that by en large the day-to-day, year-on-year, nature of the functioning of most institutions, results in the dominance of incremental, adaptive change; meaning that critical junctures are rare events. Therefore, it is important to distinguish these, because change is not necessarily the result of a critical juncture (Capoccia & Kelemen 2007, p.368)



Source: Mahoney (2000, p.514)

Figure 2-3: Contingency in a self-reinforcing sequence

Path dependent patterns thus require that the selection process during a critical juncture has an element of contingency. This means that based on the available theory at the time, the decision taken (Option B) was not expected. This does not however imply that the decision is completely random. Elson (2008, p.15) cautions though that if the conditions preceding the critical juncture can predict or explain the results of the critical juncture, then the sequence should not be considered path dependent.

Seen in this light, a working definition of contingency thus becomes necessary. In terms of its correlation with critical junctures, Capoccia & Kelemen (2007) draw from Berlin (1974), who explains contingency as “the study of what happened in the context of what could have happened” and must display two important

<sup>21</sup> A common measure by which critical junctures are assessed, where an alternative option is imagined and attempt to rerun history accordingly – see Fearon, J.D. (1991) *Counterfactuals and Hypothesis Testing in Political Science* World Politics Vol 43 No 2

characteristics. Firstly, that different decisions could have been taken, the consequences of which would have had important institutional outcomes. Secondly, that the range of plausible options was not infinite. These two requirements remove randomness from the situation and offer methodological guidance, in that the context of the critical juncture must be re-created, while also identifying the key decision makers; determining the real (not hypothetical) choices possible; examining the extent to which alternate options were considered; and reflecting on the likely consequences the alternate options could have had. In a variant to this, Pierson (2000a) notably explains contingency thus: *“large consequences may result from relatively small or contingent events”*. However, Capoccia (2015) contends that the decisions of some actors are more influential than others, and that focusing on powerful actors rather than cumulative small events is more useful. The interactions amongst actors and the choices made, create significant scope for intentionality, interpretation, and unintended consequences. Finally, Mahoney’s (2000, 513) definition of a contingent event is stronger than the mainstream dictionary definition of: *the result of events may have occurred differently*. For him, the events were not expected to take place (unlikely but possible). However, he clearly states: *“to argue that an event is contingent is not the same thing as arguing that the event is truly random and without antecedent causes”* (Carr, 1961) . **Moving to Institutional Reproduction - Lock-In:** The factors that lead to institutional reproduction are distinct from the ones that created the institution in the first place. These path dependent institutions will endure regardless of whether the forces that originally created them remain present, as explained below. Indeed, the mechanisms of reproduction are based on theory and may be so productive that they create an institutional pattern of *lock-in*. As Mahoney explains:

*“Efficacious mechanisms of reproduction enable an institution to take advantage quickly of contingent events that work in its favour, solidifying a position of dominance before alternative institutional options can recover.”*

The forces that create a contingent event are essentially historical events, which occur continuously. What is of interest to historically oriented researchers is why a particular historical event is able to influence events, whereas others, seemingly more pertinent and relevant ones, are not. Analysing the outcomes of contingent events that become locked-in, lies at the heart of path dependent research and requires the use of a theoretical framework. Due to the influence exerted by economics, the tendency has been to do so through a utilitarian explanation of efficiency, but this should be expanded to consider the dominant sociological frameworks of functional, power and legitimation explanations. Considering these different mechanisms of institutional reproduction not only provides different insights, but becomes crucial if the most appropriate mechanism to reverse lock-in is being sought. Their typologies are summed up in Table 2-1.

Table 2-1: Typologies of Path-Dependent Explanations of Institutional Reproduction

	Utilitarian Explanation	Functional Explanation	Power Explanation	Legitimation Explanation
<b>Mechanism of Reproduction</b>	Institution is reproduced through the rational cost-benefit assessment of actors	Institution is reproduced because it serves a function for an overall system	Institution is reproduced because it is supported by an elite group of actors	Institution is reproduced because actors believe it is morally just or appropriate
<b>Potential Characteristics of Institution</b>	Institution may be less efficient than previously available alternatives	Institution may be less functional than previously available alternatives	Institution may empower an elite group that was previously subordinate	Institution may be less consistent with values of actors than previously available alternatives
<b>Mechanism of Change</b>	Increased competitive pressures; learning processes	Exogenous shock that transforms system needs	Weakening of elites and strengthening of subordinate groups	Changes in values of subjective beliefs of actors

Source: Mahoney (2000)

**Reactive Sequences:** Different to self-reinforcing sequences, reactive sequences transform or even reverse previous events. A new sequence is formed, whereby each event in the sequence is both a reaction to preceding, and a cause of future events. The early events are paramount to the outcome, because a small change can accumulate over time, potentially making the result very different. Reactive sequences are best described as knock-on effects of A leading to B, leading to C, then D, etc.

The fundamental flaw of path dependency, is that the framework it uses to detail long periods of stable events and then explain sudden changes in policy paths, is less able to identify critical junctures at the point of occurrence, let alone allow for prediction. The implication is that without being able to identify critical junctures as they are happening, actors cannot take appropriate action – pointing to the inherently retroactive nature of study founded in historical institutionalism. Additionally, it may result in critical junctures being incorrectly identified as such, when in fact they were little more than just another event along the path (Peters & King 2005; Williams 2012).

*“The punctuation of these path dependencies was triggered by economic factors as much as by political factors, hence understanding policy change in a historical institutionalist perspective requires careful analysis not only of the ideas that drive the change but also the larger social, economic and political context in which these ideas are situated.”*

Peters & King (2005, p.1297)

At the same time however, a deeper understanding of critical junctures of the past, may result in greater insight being applied to the decision-making processes of the present – at the very least allowing policymakers to avoid potential pitfalls and to not repeat old mistakes, because they have been identified through retroactive analysis.

### Positive and Negative Feedback Loops

This approach provides an alternate description of path dependent mechanisms, through the concepts of self-maintaining and self-reinforcing structures. The theory is drawn from the natural sciences, which it uses to explain how a system moves from an equilibrium to a non-stable state. The most cited example of this, is that of temperature change, which has been adopted by political science as the analogy to

explain the theory and will be used in the explanation that follows. Before providing a description of each type of loop though, with temperature as the analogy to describe it, it is necessary to list two characteristics identified by Knapp (2007, 3–5). The first is that both positive and negative feedback loops may operate simultaneously, particularly when various actors have different interests or resources. The second is that despite similarities or ability to co-exist, their long-term dynamics and responses to change are radically different.

In terms of a negative feedback, it is described as a self-maintaining or self-correcting mechanism vying for a stable condition (homeostasis). Like a thermostat, whose objective is to maintain a set temperature, it responds to external forces of hot and cold by acting in the opposite way - switching itself on when the temperature drops and off when it rises. Thus, it acts to counterbalance, not reinforce, changes. Customary examples include central banks' standard and universal response to inflationary pressure, the tightening of credit policies, or politicians adjusting future policy changes to align with constituency needs prior to an election. Baumgartner & Jones (2002) point out that negative feedback is always necessary in an equilibrium model and therefore a part of all neo-institutional analysis. Without it, political interests *"would gather ever-increasing powers until they overwhelmed the entire political system."* Knapp (2007) illustrates this from the perspective of vested interests, where elites would move to restore equilibrium if their interests were to come under threat. Knapp draws on North's (1990) seminal work to emphasize that self-maintaining structures with common interests may still diverge in development, as actors move to exploit the rules. Thus, the system is able to select non-viable structures, be they inappropriate or past their usefulness - implying that negative feedback supports institutional *survival of the fittest* - a state that rational choice institutionalism, through its functionalist view, seeks to identify and eradicate (Williams 2012; Knapp 2007)

Turning to positive feedback loops, we now consider the concept of self-reinforcement. In contrast to counterbalancing, positive feedback is a self-reinforcing process which accentuates or amplifies a trend. Observing this process over time will identify the clustering of events, along with large and unexpected changes. *"Seemingly random initial events can lead to a cascade or a spiral of subsequent events that dramatically change the status quo"* (Baumgartner & Jones 2002, p.15). Here the multiplier effect forms the basis of path dependence theory as decision become *locked-in*, making their reversal costly and complex. Examples of positive feedback include economies of scale and increasing returns (Pierson 2000a, p.252). Left unchecked this leads to an unstable system of cumulative advantages and self-destruction (Williams 2012; Baumgartner & Jones 2002). In Pierson's view, political and social structures are far more prone to be characterized by positive feedback, producing path dependence, as compared to economic structures. Reverting to the analogy to illustrate the point, in a state of self-reinforcement the system would be fitted with a reverse thermostat. Such a thermostat would not submit a signal for the heat source to be switched off in response to an increase in the temperature, but the opposite. It would turn up the heat, increasing the heat even more, and it would shut off the heat source if the temperature was low. This means that positive feedback loops can amplify historical events, such that small interventions can change events significantly, resulting in multiple outcomes. It is the set point of the thermostat which becomes key, as rooms with identical structures, but different set-points (histories), display diverging developmental trajectories (Knapp 2007, p.4).

Even though both feedback loops adopt a different approach, where negative feedback makes use of counter-balance to maintain the current path, while positive feedback reinforces the existing path, the

ultimate objective is to resist path changes. An important distinction between the two is noted by Williams in her review of Pierson (2000b) where he notes that the primary difference between the two is that while the negative feedback loop focuses on maintaining a specific (set) point, the positive feedback loop endeavours to remain on the path - and in so doing is thus more prone to institutional shift, which implies change. Finally, both feedback types may occur simultaneously. A seemingly counterintuitive and counterproductive event, but the research has found several instances of the two co-existing. These are detailed in the research where they have been found to exist. In one such example, the 1970s saw a reversal of fortunes for the national economy after having experienced over a decade of high economic growth (Chapter 6.5.3). Here, a slump in the global economy was compounded by the decision to defend apartheid, as international condemnation started to grow. National government was forced to reprioritise its spending, switching from a positive (growth) to a negative feedback loop (averting a recession). It would be reasonable to expect that the national utility would automatically follow, or be instructed, to support national imperatives. This did not occur and Escom continued amplifying the trend of its overly aggressive build programme, placing additional financial pressure on the government. More pertinently, a second example can be found in Chapter 7.6.4. when municipal ESI reform that was being driven hard by national government in the mid to late 1990s, was about to enter a period of change. Here, as we have seen, reform stalled - leading to a long period of homeostasis as local government and Eskom battled national government for a better deal or no deal. Eskom, finding itself in a situation of over-supply switched to a negative feedback loop to protect its dominant position (monopoly), by ending its new build programme and committing to low tariff increases, while accelerating (positive feedback) its electrification and driving the ANC's transformation agenda. Similarly, the MEU's who adopted an unyielding stance with regards to their approach on the RED's reform programme, stalled on capital investments and essentially kept their operational spend on maintenance at a minimum (negative), awaiting a final outcome, which ultimately took over 10 years - creating a mammoth, perhaps insurmountable, deficit in capital investments. However, local government under pressure to deliver services, intensified its reliance on EDI surpluses to cross-subsidise its municipal functions (positive), exacerbating the limited funds available to maintain the municipal grids (Chapter 7.6.1).

### Punctuated Equilibrium

A significant part of the evolution of the historical institutionalism as a framework, came with the addition of the concept of punctuated equilibrium to the study of institutional change and to notions of positive and negative feedback loops and their effects. In the 1950s and 1960s for example, US policy process models described decision making as incremental and the political order as stable. Adjustments to rules were agreed upon in an orderly fashion by mutual partisan adjustment". The process was tidy, as policymakers were operating within their range of experience, and if needed, incremental changes could be reversed. Static gridlock, or political standoffs, then became topical in the late 1970s, at which point the first generation policy process models started to be challenged by authors such as Cobb, Elder, March, Olsen, and later Kingdon, who moved the theory from being one-dimensional to one that was grounded in bounded rationality (Jones & Baumgartner 2012, 1–3). The signature characteristics of punctuated equilibrium are long periods of relative stability, separated by periods of disjointed and dramatic change (Baumgartner & Jones 2002, p.3) i.e. policy processes are non-incremental. In an overview of the process, the authors explain (Baumgartner & Jones 1993, chap.1) that policy development reaches a limit, or state of equilibrium. By definition, the policy is in a negative feedback, or self-maintaining process. Political opposition to such policy may indeed mobilize a reaction and it is possible that the elite may make small concessions; but essentially the equilibrium is maintained, changing only slowly, and not by large amounts, even over long periods. Major policy changes occur when the status shifts to a positive feedback

loop, where small inputs transform into major events (amplified) - thus resulting in each change being bigger than the previous change, until a new equilibrium is reached. The process is described as the logistical S-curve, where policy adoption is slow, then very rapid, and then slow again. The point at which the system changes from a negative to a positive feedback is commonly referred to as the window of opportunity, triggered by the mobilization of the apathetic, most commonly in response to elections.

North (1990), held a slightly different view. He argued that change is not as sudden as it may appear. Behind the scenes are long periods of intense negotiation; and the example he cites is the development of new legislature or policy. The judiciary or parliament may spend months or even years debating the merits and negotiating a compromise before consensus is reached. It is possible that an external event or new information may break the deadlock, but ultimately this is on the back of long periods of seeming inactivity. In essence, however, the two theories describe a similar process. Baumgartner and Jones refer to the abovementioned negotiation period as the period of friction that occurs during the negative feedback process, which is then unleashed by an event, such as the aforementioned elections, media reportage or the drawing of public attention and galvanising of action.

In 2012, The Policy Studies Journal produced a special issue on punctuated equilibrium. For this, Jones & Baumgartner (2012) prepared an introductory paper in which they reflected how their theory and its application has evolved, while also addressing major critiques directed at it, based on the hindsight of 25 years since its early conceptualisation. In their review, the authors stress that change is not only possible during elections, but through policy-by-policy adjustment as well. *"This policy by policy adjustment process allowed for disjoint policy change to ripple through the system without the need for top-down direction (although the model certainly allowed for that)."* This would typically occur when the demands for change could no longer be contained; that is, the friction was too great. They emphasize, that the theory's foundation is bounded rationality, the basic premise of which is that (ibid, page 3) *"decision makers are prisoners to their limited attention spans, and the key governor of the allocation to attention, emotion."* Thus, after long periods of stasis, when the time comes for policy makers to act, the accumulation of bounded rationality and innate resistance to change<sup>22</sup> combines and sometimes combusts. The likely outcome then is that the response is usually disproportionate, as the system over-corrects. What it reflects is a disjointed and episodic event with the appearance that it is a response to exogenous event or forces, when in fact it is part of the same process. A critique put forward by Prindle (page 14), who supports the theory, is: 1) that a more appropriate and descriptive name is *punctuated incrementalism*; and 2) the model does not address how human choices can be translated into *"mechanical outcomes without losing the symbolic and emotional processing that is its outcome."* Here the authors responded that the latter is a powerful critique, which all working in the field should take seriously.

### 2.3.4 Comment on Drawbacks of the Three Primary New Institutional Approaches

The abovementioned frameworks explain how policy change is affected. However, as Williams (2012, p.68) points out, they suffer from two major drawbacks. The first is identifying the point at which punctuated equilibrium reverts to a negative feedback state. This is not as straightforward as it may seem.

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<sup>22</sup> The paper refers to the American political system specifically, which has been structured to make change difficult, but the authors state that this is the case for any institutional structure

Disturbing a dominant paradigm which has been in place for many years, even decades, inherently takes time in creating and identifying a new equilibrium point. Indeed, it is likely to “test” several new states of equilibrium before a commonly accepted point is reached. Thus, while identifying the criteria or mechanisms that close the process becomes a meaningful part of analysis, much time and effort can be wasted scrutinising false dawns. The second drawback is the ability, or the lack thereof, to distinguish between meaningful and symbolic junctures. According to the theory, junctures and punctuated equilibria provide a window of opportunity, where for a short period the system is conducive to meaningful long-term change now taking effect - in essence altering an institution’s path. If agents are unable to recognise these opportunities when they present themselves, then any changes achieved will in all likelihood be ineffectual, accidental or inappropriate. Similarly, misdiagnosing them may lead to much upheaval, effort and cost, but ultimately yield little. The implication is that political agents are only able to exercise limited control over institutional change, and then respond to the consequences *ex-post*. This raises rather serious questions about the ultimate utility of the above-mentioned frameworks, if at best they have explanatory, but limited predictive power, and at worst, both are questionable. However, the frameworks’ theorists have been quite clear on the predictive properties and their limitations:

*“But this is treacherous ground.”* Hall & Taylor (1996, p.951) describing the inclination of defenders of rational choice institutionalism to believe their models have predictive power.

*“Even when we can rely on models with high predictive power, they are likely to be of limited scope and will only represent certain subsets of complex, multi-arena and multilevel interactions that are characteristics of real-world processes.”* Thelen (1999 quoting Scharpf)

*“Since the rise of behaviourism, many political scientists have had lofty aspirations about developing a science of politics, rooted in parsimony and generalization and capable of predictive power. Despite modest achievements over four decades, these aspirations remain.”* Pierson (2000a, p.266)

From the mid-2000’s historical institutionalists started to focus on modernizing the theory, with an outcome of this process being the critical questioning of path dependency’s true predictive power, particularly due to concerns that researchers (wittingly or unwittingly) could influence the empirical outcomes through the selective use and order of historical facts (Rhodes et al. 2008, p.53 Sander).

*“....also builds a range of tensions within institutionalism, which are exemplified in its apparent lack of predictive power.”* Lowndes & Roberts (2013, p.21)

In many ways, evaluating the limitations of the selected theoretical framework can be, and probably is, as important as assessment of the benefits identified as appropriate for its original selection. Thus, having done so above, it is now possible to consider whether these shortcomings are sufficiently material to affect or even obstruct what the research sets out achieve. In the case of this study, one can credibly argue that they do not, as it is not an objective of the research to identify or predict the next juncture, whether symbolic or real. Indeed, the research is already based on the understanding that the broader ESI, and more specifically municipal EDI, are both facing a future of significant operational and financial challenges, with the unsuccessful decade-long attempted process from 2000 to reform the sector already providing strong evidence of this. Rather, the purpose here is to produce a detailed and factual account

of the development of the municipal ESI (and from 1969 EDI), which to date does not exist, and that considers and outlines the dominant issues of its political-economy since their inception, how these were dealt with and their consequences. Ultimately thus, while remaining cognisant of their potential drawbacks and limitations as predictive tools, the abovementioned theories are deemed appropriate as the backbone of the theoretical framework – providing an analytical ‘lens’ through which the past can be viewed, and the research findings assessed, with historical institutionalism as the key approach that sharpens the ‘research-lens’ focus.

## 2.4 Incremental Institutional Change – Historical and Constructive Institutionalism

### 2.4.1 Overview

A criticism of the above three perspectives by the discursive (constructivist) institutionalists, is that they do not adequately account for endogenous institutional changes and only tend to explain changes as exogenous shocks, such as war or similar major crises (Schmidt 2010; Gorges 2001; Peters & King 2005; Hay 2006). Multiple, small incremental changes which seem insignificant in isolation, may when grouped together, amount to significant reorientation of the programme (Peters & King 2005, p.1287), and the conditions under which established cognitive norms and processes are contested, confronted and substituted (Hay 2006, p.65) – something they believe historical institutionalism may mask.

A basic premise of institutionalism and its analytical approaches is that change often “doesn’t come easy”. Rationalists operate in the territory of equilibrium, where vested interests have taken hold and extract maximum utility in a stable environment. Under these conditions, change brings uncertainty and is therefore unwelcome. The rationalists, and indeed sociological institutionalists, struggle to explain why political systems would move from one equilibrium to another; and yet human history is replete with change and a “*theory whose goal is to predict, but which cannot explain change, has some difficulties*” (Steinmo 2000). The most common explanation provided by these approaches is that of punctuated equilibrium – an exogenous *black box* shock as explained above. Historical institutionalist researchers do not dispute that such shocks occur, nor that they can undoubtedly result in change; but do not agree that it is the only reason for change. As Thelen and Steinmo put it “*the institutions explain everything until they explain nothing*” (Immergut 2011; Mahoney & Thelen 2010; Hall & Taylor 1996; Steinmo 2000; Amenta & Ramsey 2010; Bell 2011).

### 2.4.2 Modes of Change

Institutionalists, and more specifically historicists, in recognition of the criticism or weakness in their approach, rapidly responded (Béland 2010, p.619). Bell’s (2011) paper with its unambiguous title “*Do we really need a new ‘constructivist institutionalism’ to explain institutional change?*” argues that two avenues are available to historical institutionalists. In the first, which identifies institutional stickiness and path dependency, he concedes that change is difficult under these circumstances, and by definition may rely heavily on an exogenous shock to initiate and explain change. The second approach however, identifies active agency within institutional settings, where agents are shaped (though not wholly determined) by their institutional environments. So, whereas constructivists emphasize an ideational approach, where ideas and meaning provide a mechanism for political actors to achieve consensus on



norms and values, thus creating social change, Bell (page 906) argues this is just not feasible. Political actors “cannot simply ‘make up’ their realities in ways that are disconnected from the environments they inhabit at any given point in time”. Change does take place; but within the context of the institutional environment, where political actors’ identities, interests, calculations and choices are shaped.

In a similar vein, Mahoney & Thelen (2010, 7–20) agree that the three (above mentioned) branches of new-institutionalism are very apt at explaining continuity. They have however tended to provide few clues about endogenous change, and where change has taken place during so called *critical junctures*, understood as periods of contingency, when for a brief period the usual constraints inhibiting change are lifted. In their view, institutions change incrementally over time, and not just in response to an exogenous shock. Their basic properties must be defined in ways that provide some dynamic element, which permits such change. Because institutions do not operate in isolation and compete for resources, creating tension amongst themselves, it is necessary to understand the combined effects of institutions and processes, rather than examining one institution or process at a time (Pierson & Skocpol 2002, p.696). Unintended consequences, spillover or compromises amongst political actors, means that there is nothing “*automatic, self-perpetuating, or self-reinforcing about institutional arrangements ... On this view, change and stability are in fact inextricably linked.*” Change can thus occur in numerous ways; not infrequently through shifts in the balance of power. Even here however, subtle changes and transitions are ever-present. For example, actors disadvantaged by one institution, may partner with another institution to tip the balance of power, so as to enact change. Mahoney and Thelen conclude that the very structure of institutions contains possibilities for change, animated by the power-distributional implications of institutions. Incremental change becomes possible in the “soft spots” that exist between rules, their interpretation and/or their enforcement. Four modes of institutional change are identified by Mahoney and Thelen, (summarised in Table 2-2). They provide viable alternatives to existing overly rigid approaches, which explained stability but not change (Béland 2010).

Table 2-2: Types of Gradual Change

Description	Displacement	Layering	Drift	Conversion
Removal of old rules	Yes	No	No	No
Neglect of old rules	-	No	Yes	No
Changed impact/enactment of old rules	-	No	Yes	Yes
Introduction of new rules	Yes	Yes	No	No

1. Displacement: The removal of existing rules and the introduction of new ones
2. Layering: The introduction of new rules on top or alongside existing ones
3. Drift: The changed impact of existing rules due to shifts in the environment
4. Conversion: The changed enactment of existing rules due to their strategic redeployment

**Source:** Mahoney & Thelen (2010, p.15)

Thelen and Mahoney identify two variables to explain incremental change: veto powers of institutional actors who aim to maintain the status quo, and the extent to which actors are given discretion to interpret or enforce institutional rules. The permutations are illustrated in Figure 2-4 (adapted).

VETO	High	LAYERING	DRIFT
	Low	DISPLACEMENT	CONVERSION
		Low	High
		DISCRETION	

**Source:** Mahoney & Thelen (2010, pp.19–22)

Figure 2-4: Factors and Direction of Institutional Change

Van der Heijden (2014) and (Béland 2007) and (2010) performed extensive literature reviews on the four mechanisms of gradual change, to identify their origin, assess their viability and provide critique. During this exercise, van der Heijden added a fifth mechanism of gradual change (exhaustion), which he believes Thelen and her co-authors are reluctant to include – and indeed did not in the book she co-authored with Mahoney (2010) – because exhaustion is more akin to institutional breakdown rather than institutional change. Van der Heijden’s and Béland’s analysis is summarised as follows:

**Displacement:** Existing rules are replaced by new ones and may be done so in an abrupt manner. Displacement may result in extreme shifts, as illustrated by revolutions, where there is a sudden breakdown of institutions that are replaced by new ones. However, displacement can take place over a longer period of time, when new institutions are introduced to compete and eventually take-over older institutions. An example of this was the initiation of market reform in China, which was done in a measured manner to encourage people to defect gradually, until the original system was obsolete.

**Layering:** In this situation, new rules are attached to existing rules, through amendments, additions or revisions. The new does not replace the old, but the process leads to gradual change in status and/or structure. This approach can be used both intentionally and unintentionally; and can be applied by political actors to achieve their objective incrementally, while working within the system; particularly when lacking the necessary power to introduce wholesale changes. Deemed amongst scholars to be the most commonly used strategy to effect incremental change and be able to do so rapidly; layering is effected by adding agency (actors, layers of government), structure (rules, laws, control mechanisms), or both – by (sometimes rapid) amendment, as opposed to outright (often time consuming) replacement.

**Drift:** This occurs when rules remain as they are, but external factors change, and institutions do not respond to the changing social and economic environment. Drift is related to exogenous shock; differing in that the change is not sudden but intensifies over time. An example of drift is regulatory ambiguity; when institutional rules allow for wider interpretation by those who are subject to them, than what was intended by those who set them. A further example is a failure to re-apportion electoral seats in response to urbanization, to secure a favourable outcome. The ultimate consequence of drift is to make institutions increasingly ineffective and to erode them to the point of obsolescence.

**Conversion:** Rules remain the same but are interpreted and enacted in new ways under changing external conditions, to serve new ends. Typically, conversion either follows on from or precedes another

mechanism of incremental institutional change i.e. *“layering is the means by which conversion ultimately occurs, the two processes are intimately interconnected”*.

[Here the researcher must point out that although the understanding of these four mechanisms has greatly contributed to improving knowledge of policy change, it is not certain in many instances whether they explain policy change or merely describe *“concrete episodes of incremental change without explaining them”* (Béland 2010, p.621).]

**Exhaustion:** Albeit that the result of exhaustion is institutional breakdown rather than change; this final mechanism deems inclusion because it is gradual rather than abrupt. *“Institutional exhaustion is a process in which behaviours invoked or allowed under existing rules operate to undermine these”* (Streeck & Thelen 2005, p.29). It is reached through a process, which allows behaviour that undermines an institution, to continue under the existing rules.

### 2.4.3 Agents of Change

For change to occur, it must be driven. The question becomes by who (agent) and why (motivation)? Mahoney & Thelen (2010, 22) tackle this by identifying four basic types of change agents. The benefit of recognising and categorising change agents greatly aids explanation as each type is associated with a specific mode of change, which then provides insight into the strategy used to effect change. In Mahoney’s and Thelen’s words (p 23): *“different types of change agents emerge in different institutional contexts, and where they are successful, specific modes of institutional change are likely to follow.”*

**Insurrectionaries:** Their primary goal is to actively and visibly eliminate existing institutions and rules; mostly linked to the abrupt change of critical junctures, which is their goal. It may take time, but ultimately occurs as a direct result of their actions. This agent is linked to patterns of outright displacement.

**Symbionts:** Two forms are identified here: parasitic and mutualistic. The first, parasitic, explains actors entering an institution to exploit it for their own personal gain. Knowing they are reliant on the future existence of the institution, they preserve it, but as a consequence undermine its purpose, or spirit, long-term. Parasites thrive where institutional maintenance is compromised, such as when there is a large gap between the rules and actual practises. These attributes link them with drift. Mutualistics don’t tamper with efficiency, but violate the letter of the rules to support its spirit and in so doing derive rewards, such as political support. In the short run, this variety of symbionts may appear to strengthen rather than weaken an institution – but ultimately, left unattended, will compromise the institution itself.

**Subversives:** Having similar objectives to insurrectionaries, subversives work behind the scenes and take their time identifying suitable opportunities to remove existing rules or introduce new ones. Subversives are most closely aligned with layering, and to a lesser extent, drift.

**Opportunists:** As per their title, this group will find the most suitable means to achieve their objectives and are thus most likely to adopt conversion as a mode of change.

Mahoney and Thelen then overlaid the modes of change with the agents (Figure 2-5) - providing even greater insight into the environment where each agent is most likely to emerge and succeed. i.e: A

parasitic change agent's work is best concluded where there is a high veto power (retain formal status quo) and high enforcement discretion (allowing them to alter the meaning of institutionalised rules).

		CHARACTERISTICS OF TARGETED INSTITUTION	
		LEVEL OF DISCRETION IN INTERPRETATION / ENFORCEMENT	
		Low	High
VETO CHARACTERISTICS OF THE POLITICAL CONTEXT	Strong	SUBVERSIVES (LAYERING)	SYMBIONTS (DRIFT)
	Weak	INSURRECTIONARIES (DISPLACEMENT)	OPPORTUNISTS (CONVERSION)

**Source:** Mahoney & Thelen (2010, pp.28)

Figure 2-5: Institutional Sources of Change Agents

Ultimately, the evolution of historical institutionalism as a theoretical framework and the broad combination of processes and factors now taken into account within this framework, confirms its appropriateness to this particular study, given the inherent complexity of issues and longevity of the period addressed.

## 2.5 Concluding Comment

By rooting the research in historical institutionalism, it is believed that this research acknowledges the sequential nuances and complexities prevalent in institutional evolution, while simultaneously recognising the importance of both endogenous and exogenous influences and of both sudden and incremental change. Simultaneously it provides a strong foundational framework from which key junctures, decisions and contingency events that create path dependency within this evolution, can be viewed and analysed. Thus, it is my hope that the research approach adopted and outlined here, allows for a multifaceted perspective, because the methodologies adopted have constructively engaged with the research material in the letter and the spirit of new institutionalism's relatively recent *cross border* tradition – one which maximises historical institutionalism's strengths, minimises its blind spots and provides a powerful theoretical framework from which to gain a unique perspective on where electricity supply in South Africa finds itself in 2017; and the inherent complexity of what will be inevitably involved in any credible attempt to change it.

## 3 Conceptual Framework

### 3.1 Conceptualising Decentralised Local Government

Given the strong focus on local government in this research - particularly the triangular dynamics between national government, Eskom and local government that form a key component of this study - the objective of this chapter is to provide a working definition of the concepts and terms applicable to the latter. This chapter uses a conceptual framework approach to focus specifically on local government and pays particular attention to recurring themes on which the research is based and which directly impact on discussions and analyses in some of the chapters that follow. To this end, various key concepts are introduced, including the unpacking of local government functions, their funding and the relationship with national government, as well as the inherent power dynamics, potential competing interests and incongruous individual imperatives, therein. Here, analysis considers the international and South African context to provide a frame of reference and ensure that any distortions in the local application of key concepts are not overlooked. And while the intention is not to provide critique or assess their suitability, it is to provide a common point of reference in their understanding. This then allows for discussions in later chapters to flow from a common conceptual point of departure, which minimises risks of later misinterpretation of data, by creating a shared conceptual framework on which later discussions with particular reference to the research of this study, can soundly be based. We begin with the connection between politics and administration; followed by discussions on notions of centralised and decentralised government, both of which feed into the analysis of municipal funding models that follows.

### 3.2 Politics – Administration linkage

The politics-administration dichotomy has been a central topic of public administration studies, and dates to when Woodrow Wilson first raised the concept of neutral competence in *The Study of Administration* (Wilson 1887). The theory holds that administrators are autonomous and able to apply the principles of resource optimization in the execution of their duties. Administrative skills can be learned and thus applied, and although an undeniable link exists amongst them, a clear distinction between the sphere of politics and that of administration allows administrators to manage the public sector in an efficient and independent manner (Koven 1992) (Jacobsen 2006, p.303).

A more pragmatic approach came to the fore in the 1980s, which held that such a division is not possible (Svara, 2001. 180). This view was supported by multiple empirical studies which demonstrated an extensive, though varying, intermeshing between the two, influenced by: context; position and role in formal structure; demographics and time (Jacobsen 2006, p.303).

Accepting that the primary concern of public administration is to achieve objectives that are predominantly politically determined, and that the two cannot be separated, the question Tötemeyer (1985, p.1) poses is whether the administrative function complements politics or is subordinate to it. Answering his own question, Totemeyer believes that this is determined by the extent to which democracy prevails in the country, whereby society holds government accountable through electoral democratic process. At local government level, maximising citizen participation is a necessary

requirement, but must be supported by mechanisms ensuring local governors are held responsible to the governed for their actions (Blair 2000, p.35).

### 3.3 Centralized and Decentralized Government

*“For anyone who might not yet have noticed, political decentralization is in fashion”*

Treisman (2007)

#### 3.3.1 Overview and Developments during the 20<sup>th</sup> Century

At the most basic level, the description of democratic local government is universal: An administrative and executive body, presiding over inhabitants of a specific geographic area; elected by the community it represents. Local governments vary in size and structure and operate under different conditions based on countries' system of government; but strive to meet their inhabitants' needs for goods and services, in a cost-effective manner (Alao & Owolabi 2015, p.61). In fulfilling these functions, and within the overall system, local governments have varying degrees of power to act autonomously and are authorised to undertake legislative, administrative and semi-judicial functions. Local government has the power to implement policies and programmes, raise revenue, formulate budgets, employ staff and operate going concerns to provide services. But local government is subordinate to central government and is generally the lowest 'tier' of government, where central is the first tier; provincial / regional the second, and local the third. Under a federal system, it is more common to have two levels of government of equal power (Law 2013, 105–106); and Tocqueville (1840) predicted the following:

*“I am of opinion that, in the democratic ages which are opening upon us ... that centralization will be the natural form of government”.*

Traditional thinking on political development in the United States, has been that of President Roosevelt's “New Deal” welfare state, introduced during the Great Depression of the 1930s; shifting power from individual states to national government and creating centralised, or more commonly called, “big government” (Wallis & Oates 1998, p.156). Sparrow (2011) though, takes a different view. The Second World War's most important legacy may be the way it provided legitimacy for, and instilled the populace's acceptance of, an expansive nationalized role for the state. Western Europe adopted a similar model to rebuild its economies and as a mechanism to keep tight control in a cold war era with a constant threat of war. The Soviet Republics and Eastern Europe adopted an even more centralised model under communism, where power was exerted and coordinated by a de-facto political executive, to which all provinces and local authorities complied. A similar situation existed under dictatorships, of which there were numerous from the end of the Second World War until they started to fall in the period between 1970 and mid-1990s. Keynesian economics, which justifies government intervention through public policies in the pursuit of full employment and price stability, dominated western economic theory and policy after World War II. Manor (1999, p.14) sums up the post-World War II period: *“Where Leninist principles were rejected, Keynesian approaches usually predominated”*. The belief in the centralised state was strengthened by the robust advancement of economies managed along Keynesian and Leninist lines, when for a 20-year period after the Second World War, leaders pursued the idea of progress – *“based on the assumption that the earth's resources were inexhaustible, and that science and technology would make them available to all”*.

The boom years that followed the end of the Second World War, sustained the relationship which the private sector had forged with centralized (big) government control. This started to change in the 1970s, when many advanced economies suffered the *stagflation* of inflation, slow growth and large public sector deficits (Jahan & Papageorgiou 2014, p.53) (Sanderson 2001, p.297). The ability and capacity of ‘big government’ to solve all the problems came into the spotlight. The response was for many western governments to reduce the size and scope of government. This shift is probably best captured by US President Ronald Reagan’s inaugural speech (1981) when he declared “*Government is not the solution to our problem; government is the problem*”. It was in effect calling for a more decentralised approach, with power shifting back to individual states. This trend grew, and by the late 1980s / early 1990s, governments around the world entered a cycle of decentralising fiscal, political and administrative responsibilities to lower level governments (Work 2002; Litvack et al. 1998; Weale 2006; Hood 1995; Heller 2001; Manor 1999; Treisman 2007).

*“Decentralization has quietly become a fashion of our time. It is being considered or attempted in an astonishing diversity of developing and transitional economies – by solvent and insolvent regimes, by democracies (both mature and emergent) and autocracies, by regimes making the transition to democracy and by others seeking to avoid that transition, by regimes with various colonial inheritances and by those with none. It is being attempted where civil society is strong, and where it is weak. It appeals to people of the left, the centre and the right, and to groups which disagree with each other on a number of other issues”.*

(Manor: 1999.1)

Litvack et al. (1998, p.1) cites the introduction of multiparty systems in Africa and South America, the deepening of democracy in Asia, the transition to a market system from command economy in most of the former Soviet Union and Eastern Europe, and finally “*the plain and simple reality that central governments have often failed to provide effective public services*”.

### 3.3.2 Decentralization

Decentralization is not a formula or theory easily implemented. Achieving public sector governance and reform objectives is largely contextual, as the application varies, and thus decentralization means different things to different people (Siddle & Koelble 2013; UNDP 1999; Litvack et al. 1998; Treisman 2007). As Manor (1999, p.10) points out, decentralization in India is bound to mean something different from decentralization in Botswana.

A USAID (2000, p.14) publication puts forward the following definition:

*“Decentralization is a process of transferring power to popularly elected local governments. It brings about change in the operation of institutions and almost invariably occurs gradually. Decentralization requires the existence of elected local governments because local officials do not have meaningful autonomy unless they answer to their constituents. Appointed local officials must ultimately act according to the interests of those in the national capital who gave them their jobs; they are effectively agents of the national government. A local system in which government officials are appointed, then, is a centralized system that has not begun to decentralise.”*

This definition is useful, as it recognises the precondition of central government consciously and willingly transferring power to local government, and the necessity of functional co-existence between the two.

The need for a democratically elected local government, held accountable by its constituents, creates legitimacy and autonomy, implying that authority is distributed horizontally rather than hierarchically (Totemeyer, 1988. 5). Managing these requirements in a manner that satisfies all actors, is not straightforward, especially in the South African context. As noted by the UNDP Programme (UNDP 2009) *'decentralization is a process of striking a balance between the claims of the periphery and the demands of the centre'*. Finally, the definition also recognises that: decentralization occurs over time; is a process; and the product of reforms.

As Siddle & Koelble (2013, p.20) correctly note, a definition for decentralisation is complicated by the fact that writers recognise three different types – administrative, fiscal and political. Here, definitions by Siddle (2011, p.22) are deemed appropriate:

- **Administrative decentralization:** The process whereby the authority to administer and execute powers and functions, and the responsibility to deliver services, is transferred from national to sub-national levels; resulting in a deconcentration of powers;
- **Fiscal decentralization:** Revenue from central government and the authority to raise revenue from local sources, is transferred from national to sub-national levels; and
- **Political decentralization:** The transfer of political power and authority from national to sub-national government, involves balancing the exercise of power between various levels of government. Here, Siddle quoting Treisman (2007, p.23) identifies three sub-types: *Decision-making decentralisation* implies that at least one sub-national tier of government has the exclusive authority to make decisions on at least one policy issue. *Appointment decentralisation* where government officials of one or more sub-national tiers are selected by citizens, without interference from national government. And, *constitutional decentralisation*, allowing second and third tier governments to participate meaningfully in central policy decision making.

At a practical level, decentralization aims to transfer duties to the lowest level of government capable of executing them (Work 2002, p.5) (UNDP 1999 quoting Kaul) and can be categorised into three levels: devolution, deconcentration and delegation (USAID 2000; Siddle & Koelble 2013; UNDP 1999; Work 2002; Litvack et al. 1998; Barrington 1965). Devolution provides the highest level of autonomy and finds itself outside direct central government, but still subject to national policies and laws, such as the Constitution. Deconcentration transfers power to an administrative unit of central government. Typically, such a unit would not have elected officials, and thus would be fully accountable to central government. Delegation is a transfer of specific duties under a contractual arrangement.

A review of South African government (green and white papers, commissions of enquiry) and academic literature on the subject up until the mid to late 1990s, found a tendency for decentralisation and devolution to be treated as synonyms, not recognising that the latter is a component of the former. Heymans & Töttemeyer (1988, p.25) under the heading: The Meaning of Devolution, state: *"Devolution of power – sometimes also referred to as decentralisation – must be clearly distinguished from deconcentration of power."* Atkinson and Heymans, in a later chapter, (1988. 150) state: *"It would seem that there is confusion in the terminology applied. 'Devolution' is generally regarded by political analysts as political decentralisation and not simply as administrative deconcentration."* The 1990 committee of inquiry into a system of local government (Thornhill 1990, p.8) inherently gets it right when stating what devolution means and requires: *"Devolution of power must be accompanied by devolution of fiscal sources, financial responsibility and the necessary funds."* However, the Green Paper on Local



Government (Ministry of Provincial Affairs and Constitutional Development 1997, p.27) appears to not recognise devolution as a sub-set of decentralisation. Under the Section: Decentralization and the Assignment of Powers, it states: “*National and provincial government are constitutionally permitted to devolve (hands on) powers and functions to local government. At present, several national departments are in the process of decentralizing functions to local government...*”

### 3.3.3 Benefits and Shortcomings of Decentralization

Treisman (2007) sought to determine the effects of decentralisation but concluded that the net results were inconclusive. The primary reason was that consequences tend to be complex and obscure, as many effects pull in different directions. Table 3-1 summarises the benefits and shortcomings of decentralisation.

Table 3-1: Benefits and Shortcomings of Decentralization

SUPPORT	
Benefit	Shortcoming
<i>Administrative Efficiency</i>	
Allows government to manage the provision of goods and services, which may vary across regions, more cost effectively and efficiently	Administrative, not political, decentralization can achieve this. Multi-tier structures are costly and can lead to misallocations. Cost benefit analysis is a more appropriate driver – not reform
<i>Local Competition</i>	
Local government competing for mobile residents and/or investment - encouraging performance	Robust competition amongst municipalities is hard to achieve. If it is, its often perverse - resulting in unfavourable outcomes
<i>Fiscal Incentives</i>	
Increased local revenue grows local economic activity, benefitting the nation as a whole	This decreases the share or revenue of other levels of government. The net result is indeterminate
<i>Democracy</i>	
As local issues are more quantifiable than national ones, increased local participation enhances accountability, as voters in small groups can coordinate more effectively	Citizens can be as politically active in a centralised system. Multiple government tiers make apportioning blame or credit harder, especially when responsibility is shared across the tiers
<i>Checks, Balances and Liberty</i>	
Strong local government has the potential to keep central government in check and protect individual freedoms	Local government is only likely to challenge national government to protect its local interests
<i>Veto Players and Change</i>	
Increasing the number of actors required to effect policy changes, leads to greater stability	A definite advantage, however it may be counter-productive if entrenched policies are deemed ‘bad’
<i>Local Information and Policy Innovation</i>	
Better placed to collect local information and act on it	In theory, central government should be able to do the same
<i>Ethnic Conflicts</i>	
Reduces demands for autonomy, promote cooperative behaviour amongst groups and lower political stakes	May increase demands for autonomy, heighten ethnic conflict between tiers and intensify conflicts. Benefits can go both ways
UNDERMINE	
<i>Fiscal Pressures</i>	
	Strong local government undermines fiscal and macroeconomic discipline
<i>Fiscal Coordination</i>	
	Inefficiencies due to coordination failures across levels of government

Source: Treisman (2007)

The view of the World Bank is that decentralisation can yield positive (efficiency and improved public sector responsiveness) or negative (threat to economic and financial stability) results. This is determined

*inter alia* by how it is applied, as well as prevailing local conditions (Litvack et al. 1998, p.107). Ultimately it is about potential – guaranteeing nothing (USAID 2000, p.8). This is a disturbing conclusion, given the vital importance attached to the success of decentralisation by the World Bank (Siddle 2011).

In conclusion, decentralisation has not proved to be the panacea to reform and transform local government operations and strengthen democracy. Mixed views are held on the effectiveness of decentralization, while a growing number of studies show that implementation is difficult and that each experience is unique and likely to yield mixed results (Agrawal & Ribot 1999; Johnson 2001; Meenakshisundaram 1994).

### 3.3.4 Political Legitimacy

Max Weber's descriptive interpretation of political legitimacy is that it is attained by a regime or government (wherein government denotes a sphere of influence be it national or local); whose participants' belief and faith in it, is sufficient to accept its authority and obey its commands; allowing them to exert power. Weber identified three sources of legitimacy: 1) Traditional, where people follow a social order because it has always been there; 2) Charismatic government; capable of convincing the population to place their faith in it; or 3) Its legality is trusted, specifically the rationality of the rule of law. For Weber, legitimacy is an important explanatory category for social science, because faith in a particular social order produces consistencies more stable than those derived from habitual rule-following or the pursuit of self-interest. At a normative level, political legitimacy requires a baseline of acceptability or justification of authority and even obligation. On the one end of the scale, citizens accepting compliance with the coercive political power exercised by government, will do so as long as it is deemed justified. Whereas on the other hand, political bodies can be effective without being legitimate. In other words, if their demands are met with sufficient acquiescence, they remain authoritative. The distinction between legitimacy and justice is also often blurred (Fabienne 2017). Buchanan (2002) for example believes legitimacy is a criterion for minimum justice. This blurring is highly criticised in more modern literature; accepting that the two are related but that legitimacy makes weaker demands than justice, and a state may be legitimate but unjust, while the converse is not possible.

*"A state is just if it imposes a social order that promotes freedom as non-domination for all its citizens. It is legitimate if it imposes a social order in an appropriate way. A state that fails to impose a social order in an appropriate way, however just the social order may be, is illegitimate. Vice versa, a legitimate state may fail to impose a just social order."* Pettit (2012, p.130)

## 3.4 Overview of Municipal Finance Sources

### 3.4.1 A View on the Relationship between National and Local Government

A second tier of government below the centre, is a feature of all countries, except for micro-states. South Africa has had three tiers since 1910 – national, provincial and local<sup>23</sup>. According to Lemon (2002, p.18), although present in least developed countries, there the second tier is often weakly developed or poorly

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<sup>23</sup> Chapter 4.3.3 explains the government model adopted under the South Africa Act of 1909, which allowed for the continuation of municipal councils (Point 92, page 3) which made their decisions binding unless "*varied or withdrawn by parliament of provincial council*" (Section V, 93). Additionally, municipalities were directly accountable to their respective provincial councils (Section V, 85 (vi)). These institutional arrangements meant that municipalities did not have direct access to national government and had to go through provincial structures.

resourced, or both - compromising the delivery of public goods and services. Lemon identifies three reasons why a modern country requires additional tiers. The first is for administrative reasons. Large centralised government is bureaucratic and needs a mechanism to decentralise functions, which can be more readily and efficiently administered at local level. The second is the legitimacy that a lower tier of government provides by allowing a certain degree of local autonomy. Lemon cites (Dear 1981; Clark & Dear 1984) (Rakodi 1986, p.437) who astutely note that a benefit of national government reducing its level of control, is that when useful, it can redirect blame for some of its *"knotty problems"* (Cockburn 1977), such as service delivery, to subordinate levels of government. Finally, uneven development across the country can be addressed by national government exercising organising control, by providing local government with some degree of local autonomy and specific mandates. In South Africa, Local Economic Development (LED) is a key and recurring ANC policy theme, which *inter alia* was recognised in: the 1996 Constitution *"promote the social and economic development of the community"*; the Reconstruction and Development Programme (1994); the 1998 White Paper on Local Government which introduced the concept of *"developmental local government"*; the 2000 Municipal Act; the LED Guidelines (2000); The National Framework for LED in South Africa (2006); and the Revised National LED Framework 2012-2016.

The role of local government in South Africa has thus been crucial, both pre and post democratic elections, where: 1) Prior to 1994, all local municipalities were required to raise the revenue needed to fund their operations; (with this minimal financial support from national government resulting in some autonomy and independence, within the context of a highly centralised and autocratic state); and, 2) Post 1994, the constitution recognises, and elevates, local government to one of the three spheres of government; whose mandate it is to anticipate and address local needs through the provision of specified functions; for which they are entitled to collect revenue, and if undertaken satisfactorily, will ensure national government legitimacy. In this context, the following definition for local government is deemed appropriate:

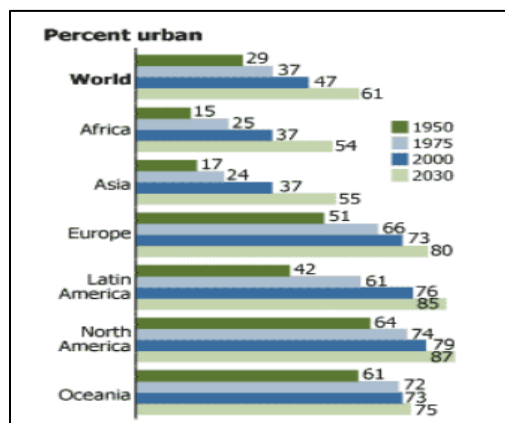
*"Any government entity having a political and spatial jurisdiction at less than the national scale, and having the authority to raise revenues from, and make expenditures on behalf of its constituents."*  
Dear (1981, p.1280)

Notwithstanding the argument by Cockburn (1977) that national government is primarily concerned with serving the interests of capital, with local government simply as an extension of national government, local government's primary focus is legitimisation, because of its relative proximity to the electorate. This is especially more acute in South Africa where local government's ability to deliver basic services to the majority of the population who were very poorly serviced, and even excluded, is directly linked to national government's perceived capacity and capability by the South African electorate. This ultimately leads to tension between the two, but local government's structure, role and mandate allows it to be motivated by servicing needs rather than accumulating profit. Conflict between the various levels of government will occur even if both spheres are governed by the same political party, and may even go as far as them opposing the state (Lemon 2002, p.20). The degree of autonomy or independence that local government enjoys, will of course, differ amongst countries and the political ideologies which govern each country. Having said that, Rakodi (1986, p.437) citing Johnston (1982) notes that local municipalities are not sovereign and would have no existence without national government, so their ability to act independently is inherently limited, though not entirely determined (Johnston & Pattie 1996, p.671). In Johnston's view,

local municipalities exist to provide specific functions, by undertaking local collective consumption service projects on behalf of national government; a view shared by (Clark & Dear 1984)..

In one respect, local government is like business. It provides services to its customers – the residents. For these services, local government charges a fee. The distinction between the two however, is that local government can also tax its residents for additional revenue (Freire et al. 2001, p.171). Levying taxes is of course unpopular with residents, so it is imperative that local government does this in a manner that is deemed equitable and reasonable.

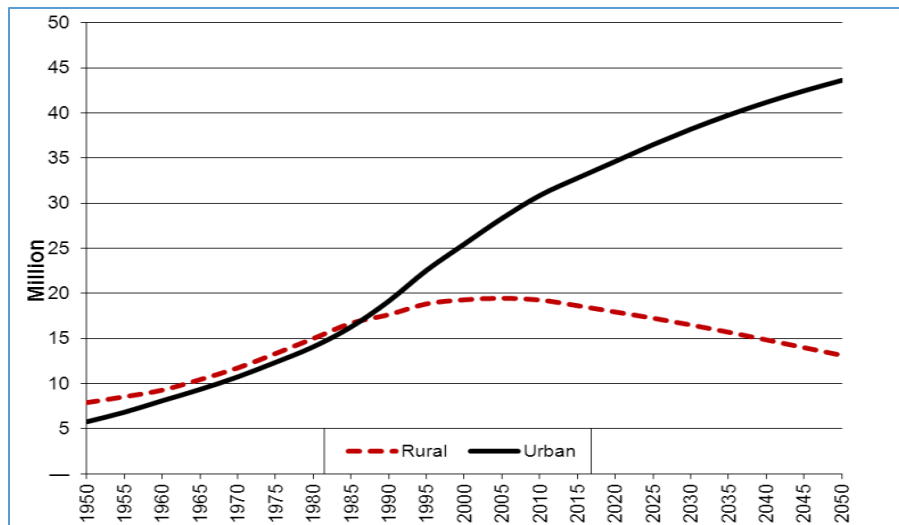
There is a long history of international research into local government structures and financing; generating a plethora of economic and policy literature on the subject. For the purposes of this thesis however, we focus on international thinking from the mid-1980s, because it was from this time that decades of a cold war global political status quo were challenged. Indeed, it was in that period that the communist system in Eastern Europe and the USSR began to unravel and fall in 1989; that China relaxed direct political control over its citizenry; Keynesian economics shifted to neo-liberal policies; and rapid advances in technology, transport and communications irrevocably transformed business and social practices. The combination of these factors created the necessary foundations for greater international integration, commonly referred to as globalisation, one of whose knock on effects was the acceleration of the global phenomenon of urbanization (Figure 3-1); placing massive and continuous pressure on municipal service delivery.



Source: UN, World Urbanization Prospects: The 2003 Revision (2004)

Figure 3-1: Population Living in Urban Areas (1950-2030)

In South Africa during this period, it became evident to all political parties that the centre could not hold for much longer. Apartheid was making its final stand and politicians were sensing that its demise was both certain and imminent. Densely populated and poverty-stricken black townships, which had little to no access to municipal services, would have to be absorbed into local government, while the urbanization rate accelerated from 1990, as people from different racial groups were no longer forced to live in pre-defined areas (Figure 3-2). This pending change, which unfolded over the better part of a decade, would have massive ramifications on the future structure of local government; and it ultimately influenced the final outcomes and decisions taken about the role and responsibilities allocated to local government in the final 1996 constitution, as well as how they would be funded (Section 4.4, 4.5 and 6.6).



Source: Turok (2012)

Figure 3-2: Total Population of Urban and Rural Areas in South Africa (1950 – 2050)

Seen within this historical context, the rest of this chapter conducts a theoretical overview of international municipal funding models over two periods: 1980 to 2000 and 2000 to 2015. The rationale for this is that the global and national events described above, led to heightened interest from international development finance agencies and academics. They in turn endeavoured to assist and influence the new municipal financial frameworks being simultaneously implemented by national governments across the world, including South Africa. The direct implication of such focused global interest was that approaches varied and evolved relatively quickly; and it would thus be worthwhile to track progression and lessons learned. The review of the literature will then allow for the identification of the primary and most used revenue sources and approaches and serve as a basis for comparison (in later Chapters) against the South African experience.

### 3.4.2 Period 1: Financial Theory of Municipal Funding Models (Mid 1980 – 2000)

Local government has four basic sources of funds, with several variants for each source (Table 3-2). The extent to which local government can use these sources rests with national government. For example, in South Africa the Constitution (1996 paragraph 228-230) allows provincial government to impose taxes, value added tax and general sales tax to fund its activities, but these forms of taxation are specifically excluded for municipalities. Additional examples include the United States (see Reynolds 2004, 392–394) and the United Kingdom, highlighting that local government's ability to raise revenue is largely prescribed. Thus, by extension, the lower the level of financial self-sufficiency, the greater the ability of central government to influence how funds are prioritised and allocated. Examples do exist where the centre finances local government almost exclusively, with the latter still enjoying full autonomy, as in the Netherlands. Mawhood (1993) however, believes that this is really only possible in industrialised countries where democracy is entrenched and the system provides citizens multiple and various means to pressurise central government.

A World Bank publication (Bahl & Linn 1992) concluded that the process of urbanization in developing countries would result in greater government intervention, and in turn, increased expenditure. High population densities create externalities which can only be attended to by the public sector, such as transport, infrastructure services, sanitation, housing, public health and safety. What is certain is that municipal expenditures continually increase with population rise. Less certain though, is whether municipal revenues increase by a commensurate amount, because the income elasticity of existing taxes is bound to decrease as unskilled and semi-skilled people migrate to urban areas. Here, primary municipal revenue sources and their influencing factors are shown in Table 3-2.

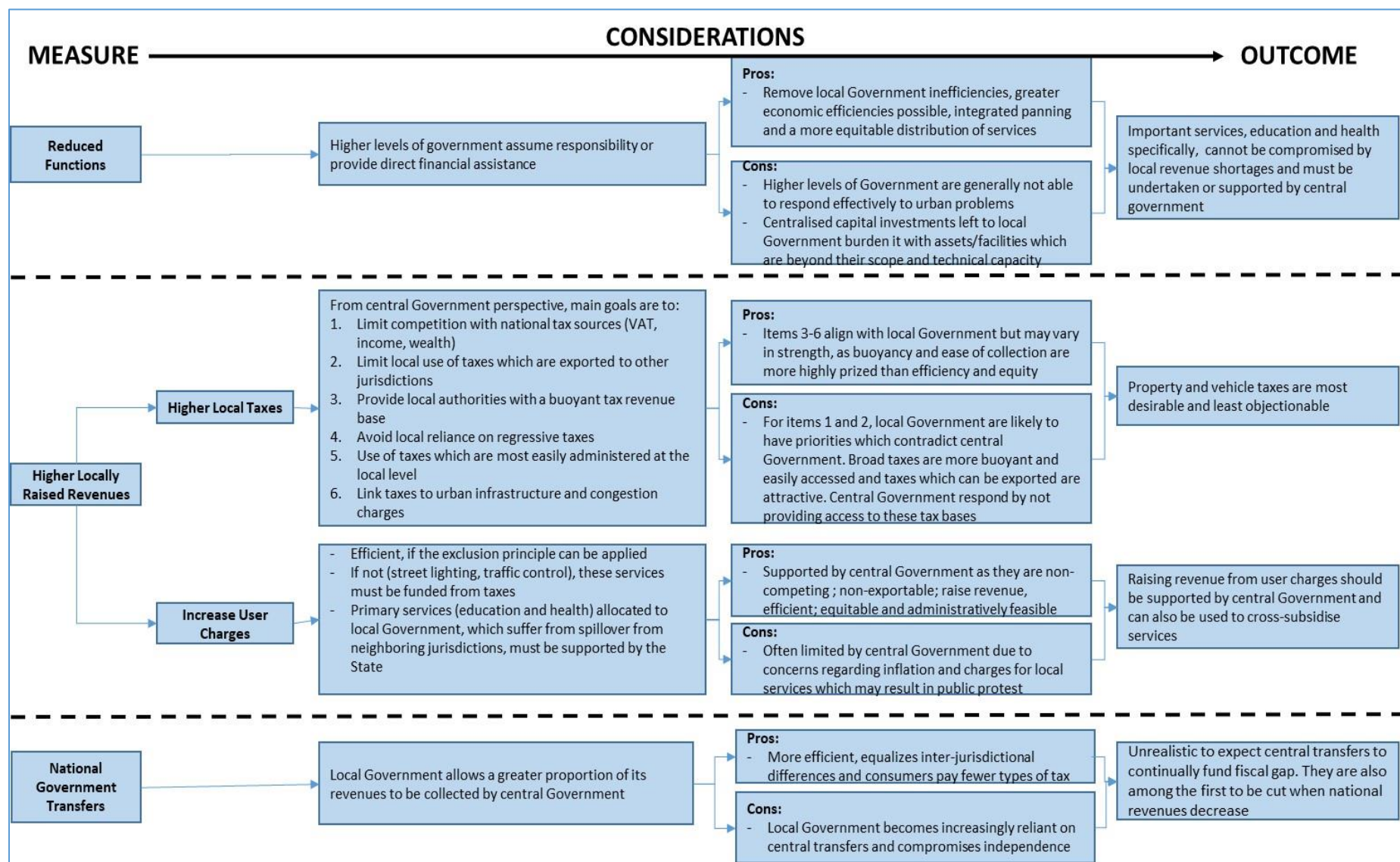
Table 3-2: Total Revenue Sources of Local Government

Revenue Source	Influenced By:
Taxes	<b>Size of the economic base of the city:</b> Made up of per capita income level and population size. The economic base has the most important influence on the buoyancy and level of tax collections, as it defines municipalities' tax capacity. However, a municipality has limited control over economic and population growth and can only partly influence outcomes.
	<b>Relation between the economic base and the various tax bases:</b> The municipality has greater influence here, as policy interventions which promote business tend to have a positive knock-on effect on residential property prices, on which property rates are based. The ratio between the various taxes is also under local government control (property, vehicle, sales etc.)
	<b>Statutory tax rate:</b> Rate is controlled by local government and can be increased, decreased or kept constant.
	<b>Collection efficiency</b> which is defined as the ratio between actual tax collection to statutory tax liability.
	<b>The mix of taxes selected:</b> Local government can determine how available instruments are applied. However, the options are generally limited by national government, who are not in favour of duplicate and competing taxes levied by local government, such as personal or company income tax and VAT.
User Charges	<b>Quantity</b> of service per capita and the <b>unit charge</b> for the service. The ability to cover the cost of provision of the service depends on the price charged compared to the average cost price of the service. This is influenced by two factors – the service and the ability of local government to charge rates that are sufficiently high enough to cover the costs of the service. Transportation, municipals parks and zoos are good international examples of services which are not able to cover costs, whereas utility services tend to generate surpluses.
External Funds	<b>Grants and loans:</b> Transfers from national government, which may also be discretionary, are not under the control of local government. Certain amounts are guaranteed under constitutional or legislated equitable share or revenue sharing schemes, which may have adverse effects. For example, there may be a bias towards rural or smaller municipalities so as to compensate them for a limited tax base, which puts greater pressure on large cities who are struggling with high rates of urbanization. Furthermore, transfers may be negatively impacted by external factors, such as reduced national tax collections because of poor economic conditions.
Loans	<b>Borrowing:</b> Appropriate only for major capital expenditure and should not be relied upon to finance operational expenditure.

Source: (Bahl & Linn 1992)

International experience, specifically amongst developing countries, points to major fiscal reform in addressing budget deficits as being unlikely, for several reasons. Key amongst these are: An unwillingness for national treasuries to relinquish or share their tax base; the fear of untested measures failing; and a reluctance of ruling governments to instigate change, who while recognising the need for it, leave it for future administrations to deal with. Thus, *“gradual and stepwise adjustments of the existing structure toward a more desirable state is perhaps the best that can be hoped for.”* Bahl & Linn (1992, 60–75). What then are the options for local government to close the fiscal gap? Figure 3-3 summarises the choices, followed by a more detailed analysis of prevalent thinking during the time period under discussion.





Source:(adapted from Bahl & Linn 1992)

Figure 3-3: Municipal Revenue Sources

## Higher Local Taxes

The notion that tax collection other than property tax is the exclusive preserve of national government, is dispelled outright by Mawhood (1993). For as long as tax can be collected efficiently, it matters little as to whether it is done by national or local government, or both. Universally, the most popular municipal tax instrument is property taxation. Depending on how the property tax is applied, it can be regressive or progressive<sup>24</sup>, but whichever, it is marginally so. The strength of a property tax is that it is inexpensive to collect, uniform in its application, and easily understood by residents because it targets owners of land and property who are likely to be more affluent. The tax does have several weaknesses though. The first, is that it is not an easy system to administer. A register has to be kept which must be updated regularly, as property prices fluctuate, based on renovations or upgrades for example. The second limitation is the ability to pay. Families may live in a large house because of their size; not because they are wealthy. In contrast, wealthy individuals who occupy small properties, may pay less than intended. Finally, many households may be asset rich but cash flow poor, such as pensioners (Solomon 1983; AMEU 1995; Mawhood 1993; Reynolds 2004; van Ryneveld 1990). Excessive taxation or non-uniform local taxation, may result in affected residents rejecting the taxes through evasion; reduced building activity or relocating to a municipality where taxes are lower (disinvestment) – as occurred in Johannesburg in the early 1990s (see Chapter 7.4.2 Municipal Finances and the Policy of Rate Relief from Municipal Electricity Undertaking Revenue); or a loss of electoral support, as Margaret Thatcher found out in the British poll tax debacle of the early 1990s..

Other taxes and revenue streams, such as fines and license fees, are available; however these tend to exist for historic reasons and suffer from equity effects and inefficiency. They also tend to have high administration requirements in relation revenue collected. Their advantage in addition to being available, is that they are accepted by the local population. It is therefore up to municipalities to maximise the revenue generated from them, which should not be neglected. These taxes are seldom sufficient to fund operations however, and local politicians face a backlash if increased significantly.

## User Charges

The construction and development of utilities, especially in developing countries, usually followed a centralised path. This was predominantly because of a greater ability to fund heavily capital-intensive projects by central government, as well as: *inter alia*, cost reduction through economies of scale, the need for integrated planning of regional or national supply and assuring standardization, while maximising the use of technical resources. An additional benefit was the ability for central government to cross-subsidise urban-rural tariffs, as the latter is considerably higher per resident. In many instances, municipalities or local agencies took control of distributing to the end-user. This practise was deemed inefficient by the World Bank, as under-priced services encourage over-consumption and waste. The primary objective in the provision of services had to be economic efficiency and not revenue generation, and on this basis promoted the privatisation of these services to reduce the fiscal burden of public utilities (World Bank 1988). The Bank warned however, changes would need to be managed carefully, as any attempt by local

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<sup>24</sup> A progressive tax is defined as a tax whose rate increases as the payer's income increases. That is, individuals who earn high incomes have a greater proportion of their incomes taken to pay the tax. A regressive tax, on the other hand, is one whose rate increases as the payer's income decreases.



government to charge for services previously provided for free, or at subsidised rates, tends to be misguidedly viewed by residents as a pure “*revenue-grab*”. For many municipalities however, especially those with limited or no tax power, the surpluses earned on the trading of services invariably becomes the primary source of income; and because it is generally not accessible to other levels of government, interference is unlikely.

Within this milieu, the review by Bahl & Linn (1992) of numerous practises across developing countries, confirmed that where electricity is distributed by a national or regional agency, it usually leads to an implicit system of cross-subsidies from low-cost urban to high-cost rural consumers and also to high usage subsidising low usage households through block rates<sup>25</sup>; while industrial and commercial users, who are subject to load pricing<sup>26</sup>, tend to subsidise residential users. Where distribution is undertaken by the municipality, there is a fixed access or connection charge in addition to a rate / kWh charge (fixed or block), but no load pricing. Efficient pricing to fund additional demand during peak consumption periods, and to send price signals to consumers, was strongly recommended, but had to be weighed up against actual consumption, due to the cost of more sophisticated and frequent meter readings. Also, recognising that marginal cost pricing<sup>27</sup> would lead to surpluses, municipalities had to thus decide how best to deploy the windfall. Two options were identified. The first sees the municipal department delivering the service as being “taxed” by its owner (the municipality), or as being required to make a mandatory budgetary contribution. These proceeds could then be allocated to the general account or used for specific services, such as municipal bus services (Mumbai) or water and sewerage (Cali). The second then uses the surpluses to subsidise low end users through a ‘life-line’ rate for a pre-specified monthly consumption amount, or to subsidise operational and capital costs in low income suburbs.

In the absence of privatisation, the review concluded that it was not averse to municipalities generating surpluses from electricity distribution, and indeed found it to be a practical and reliable source of revenue. However, to the extent possible, utility services must be financed by user charges and fees; while tariffs need to be cost reflective and efficient, so as to make it fair and encourage responsible use (McLure & Martinez-Vazquez 2000, p.12).

### National Transfers

Centralising revenue collection may have the advantage of simplifying taxation for government and citizens; but will more than likely compromise local government, because it creates a level of dependence that tends to serve the priorities of national, not local government. Through national transfers, local government - denied access to a wider range of revenue instruments - can thus legitimately claim a portion of nationally collected revenues and does so, under an equitable share arrangement and infrastructure grants. The manner in which the share is calculated is often intended to address specific weaknesses and shortages; particularly given that the burden of providing for the poor who cannot afford services is unevenly distributed between municipalities; albeit that there are compelling reasons for

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<sup>25</sup> With increasing block tariffs, the rate per unit of electricity increases as the volume of consumption increases. Consumers face a low rate up to the first block of consumption and pay a higher price up to the limit of the second block, and so on until the highest block of consumption

<sup>26</sup> Pricing strategy wherein the service provider charges a higher price during peak demand times. Peak-load pricing allocates the cost of capacity across several time periods when demand systematically fluctuates.

<sup>27</sup> Marginal costs include every cost incurred to bring that one more unit to the market. If producing one more kWh requires building a new power plant, the plant is included in the marginal cost.

providing these services, including imperatives of perceived legitimacy. And for that reason, this approach was adopted in South Africa. The Constitution (1996) mandates local government to deliver specific services and functions, and then allocates an equitable share of national revenue to it, so as to ensure it has financial resources to execute its obligations. The formula - designed to be objective, transparent and beyond manipulation - is purposefully skewed towards smaller municipalities, which have a lower revenue collection potential (as the poor cannot afford to pay for services, let alone taxes); and also to provide the poor (not all of whom are indigent) access to basic services (see FFC 2012) (National Treasury, 2017). Here, the objective would be to assist provincial and local government, whose constitutional mandate compels delivering specific functions, with the financial means to execute developmental government to redress past inequities by making services more accessible and affordable, and thus legitimise national government.

### Concluding Comment

Recognition that municipal revenue would come under increasing pressure, existed from the outset, primarily because of high urbanization rates, and especially for South Africa which experienced a spike after the fall of apartheid that had inhibited movement of people (as detailed in Figure 4-3 above). How to mitigate it was less obvious. Developing countries, and specifically South Africa, which received significant technical and advisory support from the World Bank and International Monetary Fund from 1990 (Seekings & Nattrass 2015, p.7), espoused a neo-liberal economic approach. It was based on developing business friendly policies, which would ultimately lead to competitive markets and efficiencies, and in turn to greater prosperity. At municipal level, this entailed: privatising or outsourcing functions; forging private-public partnerships; focusing on cost recovery and value-for money, and on customers rather than citizens; and ultimately, on promoting competition – which if introduced for services, (electricity being a prime candidate), would decrease prices and make them more accessible to the poor. Fiscal decentralisation at local government level meant that local revenue collection had to be maximised, for several reasons: Firstly, it would provide a level of independence from central government and in turn strengthen democratization. Secondly, it would provide the financial means for local government to execute its mandated functions more equitably and in the manner required. Finally, it would provide greater transparency, allowing constituents to hold office bearers to account.

### 3.4.3 Period 2: Financial Theory of Municipal Funding Models (2000 – 2015)

***“Wherever possible, charge.”***

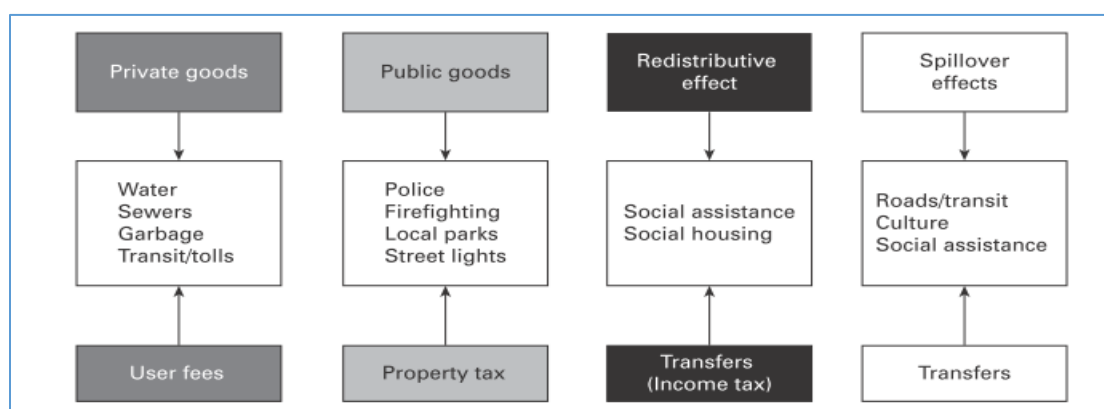
Bird (2000)

As predicted in period 1, the pressure on municipalities, and their (in) ability to administer their functions and provide services, continued to grow as urbanization intensified. This strain has been exacerbated by a greater emphasis on the need to check environmental degradation and preserve natural resources (which has reached crisis point in many cities), together with a growing backlog of infrastructure demands (Martinez-Vazquez 2015, p.14).

By mid-2005, as many as 75 developing countries had followed the example of their industrialised counterparts and implemented fiscal decentralization policies put forward in the 1980s, to improve service delivery and reduce poverty (Slack 2009, p.14). It is thus worth noting the outcomes. Here, a starting point is that almost always, the process of fiscal decentralization has two consequences: In the first instance, central and provincial functions are offloaded or downloaded to local government; with

budgetary authority, but almost always without taxation authority, which central government retains. The second outcome, a natural consequence of the first, is that revenues under local government control rarely matches expenditures (Slack 2009; Bird 2001; Bird 2011)

A review of literature around fiscal decentralisation and local government revenue sources to fund municipal functions from 2000 on, (Farvacque-Vitkovic & Kopanyi 2014; Slack 2009; Bird 2001; Martinez-Vazquez 2015; Dewees 2002; Freire & Stren 2001; Bird 2011; Bird 2000; Boyle 2012; Bahl & Smoke 2003), cites the same primary revenue sources, albeit that they vary across countries: Local tax (primarily property); user fees and charges; intergovernmental transfers; and where allowed, private sector loans. The authors strongly support the requirement for local government to generate as much revenue as possible from its own sources and should comply with two basic principles: 1) The service or function provided must be clearly linked to the revenue source; and 2) Services should be financed by their beneficiaries. Under these conditions, private services supplied by local authorities are thus excludable. For example, if a consumer does not pay for the service, they can be cut off. Pure, or non-excludable, public services on the other hand, such as street lighting and firefighting, should be financed from local taxes. Under the strictest definition, redistributive and spill-over effects exceed the mandate of local government; but if responsibility lies with local government, it must be funded from inter-governmental transfers, and not from user fees or local taxes (Figure 3-4).



Source: (Slack 2009)

Figure 3-4: Financing Tools for Municipal Functions and Services

The authors were unequivocally united on the need for efficient, cost-reflective pricing for private goods (such as water and electricity), because provision of these services creates ideal opportunity for municipalities to secure a reliable revenue source, through user fees and charges:

*“The most obvious, and in many ways the most sensible recommendation that can be made with respect to revenue structures at any level of government, is to employ user charges wherever possible”*  
Bird (2000).

In developing countries’ contexts (but not exclusively), private services are often subsidised and sold at below cost. Such practises are discouraged however, as they misallocate resources, send incorrect pricing signals during shortages, and are under-valued; resulting in wasteful usage. Affordability issues for low-

end users can of course be supported using targeted mechanisms. Indeed, to the greatest extent possible, the financing tools listed in Figure 3-4 should aim to conform to as many of the economic principles listed in Figure 3-5 as possible, although this is not always to be expected. For example, an equitable tax system may not be simple to administer, while a politically acceptable tax may not offer the level of transparency necessary. Likewise, high levels of cross-subsidisation are likely to compromise accountability.

Economic Efficiency	→	Society receives the largest bundle of goods and services due to the efficient allocation of resources, which is achieved through marginal cost pricing. The tax or fee indicates what consumers are willing to pay and the marginal cost measures the cost of resources used in producing the services
Fairness (Equity)	→	Achieved when those who receive public services pay for them. Fairness can be realized through horizontal equity (those with similar ability should pay similar amounts), and vertical equity (those with different ability should pay different amounts)
Accountability	→	Taxes / user charges and expenditures are designed in a manner which is clear to taxpayers, so that they can hold policy makers to account. The more direct the relationship between the beneficiaries of a service and payment thereof and the lower the level of complexity, the greater the degree of accountability
Adequacy and Stability	→	Revenues are sufficient to fund functions and services on a continuing basis. Revenues must be regular and stable to allow for accurate budgeting and future planning
Autonomy	→	Municipalities have the authority and flexibility to set their own priorities. This is achieved by having adequate own source revenue and minimizing dependence on higher levels of government
Ease and Cost of Administration	→	Time devoted to assess, collect and account for revenues is minimised. Taxpayers efforts to comply with tax requirements must also be minimised

Figure 3-5: Public Finance Principle for Local Government Revenue

## Local Taxes

It is advisable, where possible, for municipalities to have a mix of taxes, as this provides more options and greater flexibility to respond to changes in the economy, expenditure needs, political and other factors.

*“International experience tells us that the most responsible and accountable local governments are those who raise their own revenues and set their own taxes. Unless local governments can alter the tax rates, they will not achieve local autonomy or accountability”* Slack (2009)

Bird (2000) identified six characteristics of a good local tax. Table 3-3 compares these against an older (Moak & Hillhouse 1975) and more recent global assessments (Martinez-Vazquez 2015), as well as an analysis undertaken by Bahl & Smoke (2003), specifically on the South African sub-national revenue system. The sources have been specifically selected to be forty years apart, to ascertain the extent to which academic thinking has evolved over time. The comparison shows that the principles have changed little. However, Bird, Bahl and Martinez-Vazquez (2015) caution that taxes should not be used to achieve wider government objectives, as these are better pursued by central government alone. The priority at sub-national level should be on efficiency.

Table 3-3: Characteristics of a Good Local Tax

	Moak (1975)	Bird (2000)	Bahl (2003)	Vasquez (2015)
The tax should be relatively immobile so that local governments can vary the tax rates without losing a significant portion of the tax base		✓		✓
Buoyancy - rates changing in proportion to the economic base	✓		✓	✓
The tax yield should be adequate to meet local needs, increase over time as expenditures increase, and be relatively stable and predictable	✓	✓	✓	Implied
The tax should not be one that is easy to export to non-residents		✓	✓	✓
The tax base should be visible to ensure accountability		✓		✓
Taxpayers should perceive the tax to be reasonably fair (equitable)	✓	✓	✓	✓
The tax should be relatively easy to administer	✓	✓	✓	✓
The tax should be relatively efficient, causing low distortions in economic activity				✓
Being politically acceptable	✓		✓	✓
The tax should not interfere with domestic or national commerce (neutral)	✓		✓	✓

Source: (Martinez-Vazquez 2015; Bird 2000; Bahl & Smoke 2003)

In terms of property taxes, economic efficiency principles dictate that property owners who are most inelastic should pay the highest rates. Businesses are undoubtedly more portable than households and should thus attract lower property tax rates. Additional taxes, subject to central government approval, include: personal income taxes, corporate income taxes, payroll taxes (such as the RSC levy which was abandoned by National Treasury in South Africa in 2005), general consumption taxes, vehicle taxes, and hotel occupancy taxes.

### User Fees

User fees are viewed as a potential, rather than reliable and stable revenue source, while services should be charged at appropriately set rates; which people are willing to pay. Three types of user fees and charges exist: 1) Services fees - also referred to as nuisance fees, including: dog, marriage and business licenses, charging for copies and other similar services; 2) Public prices - revenue received over and above the cost-recovery from the sale of private goods such as electricity, water and admission to recreation facilities; and 3) Specific benefit taxes - Compulsory levies applied to individuals (or corporations) assumed to benefit as a group from certain services. Examples include special assessments, supplementary property taxes, improvement taxes etc.

To comply with economic efficiency theory, user fees should be set at a competitive private level, with no subsidy. If one is necessary, it should be accounted for separately. This is often difficult in practice, as local government must ensure equity for all its citizens. Here there are opposing views. Bird (2000) states: *“attempting to rectify fundamental distributional problems through inefficiently pricing scarce local resources is almost always a bad idea, resulting in little if any equity being purchased at a high price in efficiency terms”*. Conversely, More (1999) argues that in societies where there are disparate income levels (inequality), a user fee, regardless of the level it is set at, excludes people at the margin. Public goods and services are meant for all residents and equity should be prioritised over efficiency by adopting a functionalist approach. Kessides & Valbonesi (2009) assessed the impact of privatisation and market liberalization reforms on the affordability of public utility services of low-income households in developing countries. Popular theory in the 1990s held that privatising monolithic state-owned utilities to reverse the consequences of long periods of under-investment, cross-subsidisation and loss-making operations, was

a viable and pragmatic solution. Aligning tariffs with costs was a necessary outcome. Concerns as to how this would impact low income households, because of private companies focusing on the most profitable customers, were then balanced as best as possible by governments. But the reality was that tariffs would have to increase continually to fund investment to expand and maintain electrical systems. The trade-off for many families was energy poverty; having to choose between energy, food and medicine, to make their homes liveable during cold winters and hot summers. In analysing twenty years of the effects of privatisation policies, the study found that the impact on the poor was grossly underestimated. Ultimately, it meant that default was about the ability, and not the (un)willingness, to pay higher utility tariffs; and the report concluded that an effective affordability analysis must be an integral part of every utility's reform programme, especially during economic downturns.

With both taxes and benefit charges / user fees available as funding options to local government, it is perhaps useful to interrogate the fundamental distinction between the two. At first sight, they appear to have similar characteristics, as proceeds are used to fund public sector functions and services. As More (1999, p.242) points out: *"What is the difference between a tax and a fee? Not much, except that fees are regressive while at least some forms of taxes (the graduated income tax and, to a far lesser extent, the property tax) are progressive."* Simplistic examples, such as personal tax (to fund general public sector activities) and a parking entrance fee (to offset direct costs) are easy to understand, because application of the proceeds is transparent. Public confusion and outrage result when proceeds are indirect and opaque, such as an excise tax on plastic packets to fund environmental programmes; or fees incorrectly labelled for political reasons, such as campaign pledges not to increase taxes, (notwithstanding the fact that additional government revenue was always necessary), which is then sourced through increased and / or new user fees. Here a detailed study on the subject by Duff (2004) provides a balanced assessment: Benefit taxes and user fees are just one additional mechanism for government to raise revenue; and when used appropriately can deliver efficiency, accountability and fairness. They can however become regressive when used for pure public goods and redistributive transfers. The research concurs with the allocation of revenue sources shown in Figure 3-4.

### National Transfers

On occasion such transfers are necessary, but should be avoided where possible, as they can affect local decision-making authority, because conditional grants for example, must be spent in a specific manner. They can also lead to inefficient local government decisions, as the incentive for accurate cost management is lost. A further concern is that of accountability, particularly when multiple sources of external funding exist for a specific service or function, as ownership can be easily assigned to one of the funders. Finally, transfers can be erratic and unpredictable, which makes long term planning difficult, while the unexpected loss thereof could result in the need to increase local taxes and user fees or to reduce expenditures. This is never popular with local constituents (Slack 2009). Capital grants on the other hand are often necessary, because sub-national governments are responsible for major capital projects, but often lack the authority or the investment grading to source external loans (Martinez-Vazquez 2015).

### Direct Borrowing

As cities grow, the nature and size of capital infrastructure projects grows proportionally. Local government often does not have the liquidity to pay for these upfront, and the costs need to be



distributed over time. It is therefore necessary for central government to permit sub-national government to develop an effective borrowing mechanism, controlled through clear rules (Martinez-Vazquez 2015).

### 3.5 Conclusion

This chapter has sought to provide a conceptual framework in promoting common understanding of key concepts around the various tiers of government, their dynamics, functions and funding. From the discussions in this chapter, it is clear that local government provides a level of immediate legitimacy to central government through the direct provision of local functions and services to the electorate (appropriately so, as local government is best placed to understand and respond to needs of the community) while providing both a buffer and a conduit between citizenry and central government. Strong and independent local government also strengthens democracy. At the same time, local government's limited capacity to directly raise revenue, coupled with South Africa's central government over-arching objective to maximise municipal self-reliance, creates very particular tensions, many of which we will see playing themselves out in the research that follows. This scenario is made all the more complex by the fact that local government, burdened with imperative of self-reliance and public service delivery, with limited revenue and human resources, often has to rely on central government transfers – directly impacting on power dynamics between the two, with relatively strong risks of central government funding being non-discretionary or “coming with political strings attached”. And as we shall see in later chapters, it is the potential incongruities in policies around local government functions, their funding and institutional arrangements embedded thereby, which strongly speak to the crises that municipal EDI and local governments face today.

Ultimately, the institutional arrangements which determine the power wielded by the various tiers of government within a country, tend to endure, but are not necessarily permanent. The research has shown that they are influenced by national and international political events. The Great War for example led to greater political instability in Europe, the rise of communism in Russia, the Great Depression and Second World War, which saw a prolonged period where big government was the order of the day. The fall of communism ushered a period of economic growth underpinned by globalisation, and with it a universal call for, and a move to, greater autonomy for lower tiers of government. The reasons were clear and the benefits were bound to outweigh any disadvantages. But, as with most things related to politics, outcomes vary at best, and at worst, may even take a country backwards. Indeed, as elaborated at the start of this chapter, the founding fathers of old institutionalism (study of formal legal arrangements of political institutions - Chapter 3.3) had widely divergent views: de Tocqueville predicting highly centralised government; and Woodrow Wilson believing, almost naively one could say, that bureaucrats could execute their duties unencumbered by politics. By the mid-2000's a more balanced assessment of decentralization concluded that an “*elixir it ain't*” and must be introduced and managed carefully, if national government and citizens are to reap its purported benefits. Poor or half-hearted implementation will quickly lead to a legitimacy crisis, as has happened in South Africa and explored in more detail in Chapter 4.

## 4. The Evolution of Central, Provincial and Municipal Government Administration in South Africa

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### 4.1 Introduction

The development of government, and especially local government, must be understood as the context within which municipal ESI developed in South Africa. This chapter thus traces the evolution of government in South Africa, to provide context and high-level perspective to the detailed analyses of particular actors and factors discussed in later chapters. To fulfil such a role, this chapter bores down into sufficient detail to provide the requisite foundation to support the research topic, while ensuring it does not become a topic itself. The historical narrative of this chapter therefore seeks to broadly examine the overall fortunes of local government under the three defined time periods selected for this study; with the purpose of extracting the prevailing national political dynamics for each period, together with how policy decisions were delegated down to local government, as well as their impact and manner in which the third tier responded. To achieve the objective of overall context, the national and provincial government sections deal almost exclusively with internal matters for each time period and do not delve into knock-on effects across tiers. The consequences of decisions and actions taken at the higher-level manifest in the local government sections.

Ultimately, given that this chapter is a context-providing review, it is understood that it is not undertaken in sufficient detail to draw in-depth conclusions or outcomes identified in historical institutionalism. Indeed, at the behest of the research literature warning against hasty extrapolation, such advice is heeded. Prognostication is not its purpose. Context provision is; with later chapters fulfilling a detailed analytical role. In this chapter however, where the evidence is deemed satisfactory, or displays characteristics particular to the approach of historical institutionalism, observations may be seen as worthy of consideration, albeit inconclusive for now, until interrogated in detail in later chapters.

### 4.2 Government Prior to 1910

The origins of local government with an elected council go back as far as 1836; but forms evolved differently, dependant on particular British and Dutch influences (Tsatsire & Nealer 2009). Local Government was initially influenced by Dutch rule<sup>28</sup> (1652 to 1795 and 1803 to 1806) and then by the British (1795 to 1803 and 1806 to 1910), both of whom left deep impressions on the tradition and structure of local government. The former deeply impacted the system of rural and early town government, first when the Cape was initially colonised, and once again when the Dutch Voortrekkers ventured inland past the British colonial frontiers in 1836<sup>29</sup>, establishing the two Boer Republics of the Orange Free State and Transvaal. The British on the other hand, influenced the development of urban municipal government, starting in the Cape Colony which then spread to all four provinces. Vosloo & Jeppe (1974) identify three forms of government during this period:

**Rural Government:** The inland migrations under the Dutch made it increasingly difficult to administer local affairs in outlying areas. Thus, for each new council, a magistrate (Landdrost) and councillor (Heemraden)

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<sup>28</sup> The Dutch established a trading post on the Cape Peninsula (now Cape Town) in 1652 which quickly developed into a colony. The Dutch ruled until the British seized the colony in 1795 during the Napoleonic wars. The Dutch recovered the territory after the Treaty of Amiens in 1803 but the territory was surrendered back to the British in 1806.

<sup>29</sup> The main cause being the passing of the Slavery Abolition Act of 1833 by the British Parliament which abolished slavery throughout the Empire



were appointed; based on the Dutch 'heemraad' system dating back to the 13th Century, which was replicated in all new districts until the British took over in 1827, when it was abandoned. The new system then divorced judicial ambit from other functions of rural administration. In 1836 municipal councils were created for towns, and road boards and school commissions were set up to perform the non-judicial functions of rural government. The system was revived in 1855, but ultimately abolished when the two Boer Republics were conquered by the British in the Anglo-Boer War of 1899-1902.

**Town Government:** Following a petition for political reform to allow burghers (citizens) greater representation, a committee consisting of three officials and three burghers was created in Cape Town by the Dutch in 1792. The British, who ended Dutch rule in 1796, replaced the existing municipal committee with the 'Burgher Senate' consisting of six burghers appointed by the governor, one of whom the senate would elect as chairman. Under this system, municipal powers were extended, and new forms of taxation introduced. Dutch rule was restored in 1803 and the new Commissioner-General planned to emulate the democratic spirit of late eighteenth-century Europe, by replacing the self-selected oligarchic burgher senate with a popularly elected council. This proposal was rejected by the governor, but the senate's powers were extended and functions increased. The significance of this institution was a symbol of self-government by Cape colonists.

**Municipal Government:** With the British re-occupying the Cape Colony in 1806, the Anglicisation of institutions began. The burgher senate was re-instated with the objective of introducing popular local representation in 1827. The posts of landdrost and heemraden were eliminated in 1828, and judicial functions separated from other government roles. The Municipal Ordinance Act was passed in 1836, which set up local government for towns in the form of a board of commissioners, elected by households for a period of three years. Rates were levied annually by a public assembly; and the ordinance was essentially a framework within which municipal regulations were drawn for differing organizations and powers, to meet the needs of each municipality. This home rule measure allowed each local community to frame its own constitution in accordance with its own circumstances. The ordinance was adopted by Natal (1847), and with minor variations, even by the two Boer Republics – Orange Free State (1856) and Transvaal (1877). Since it borrowed heavily from the English Municipal Corporation Act of 1835, it formed the basic framework for the subsequent introduction of typically British terms and practises such as mayor, town clerk, councillors, standing committee systems, by-law powers and the concept of 'municipal corporation'.

The second Anglo Boer war ended in 1902 and under the Treaty of Vereeniging, the Boer states of Transvaal and Orange River Colony (Orange Free State), lost their autonomy and agreed to come under the sovereignty of the British Empire; on the understanding however, that they would be given self-government in future.

## 4.3 Creation of the Union of South Africa (1910 - 1948)

The South Africa Act of 1909 was an Act of the British Parliament, merging the two British colonies and the two defeated Boer Republics, to create the Union of South Africa. The Act allocated national government executive authority over provincial government, which in turn presided directly over local government (Government 1909 Section 85(vi)).

### 4.3.1 Central Government:

Central authority was vested in the national legislature (parliament), its executive institutions and the judiciary. Based on the British Westminster system, parliament was the sovereign legislative authority and

the courts were not empowered to test the validity of parliamentary legislation adopted by constitutionally prescribed procedures. The House of Assembly was by far the most important unit in the legislative structure, with bills that appropriated revenue or imposed taxation, originating in the house; and the political party with majority support, gained control of the entire governmental structure. The judiciary was established and functioned in terms of acts of parliament, while court hierarchy consisted of appellate, provincial, local and circuit divisions of the supreme courts, as well as special courts and a variety of local courts for the various magisterial districts, together with special courts for “Bantu”<sup>30</sup> matters. Police fell under the state, while local governments had their own traffic police (Vosloo & Jeppe 1974).

The national convention of 1908 to formulate consensus on the formation of the Union of South Africa, came under severe strain regarding the issue of non-white political rights. The Cape Province supported the extension of the non-white franchise rights, but the other three provinces favoured the restriction of all rights. It was decided to maintain the existing *status quo* in each province, with the important condition the United Party would not permit non-white electoral candidates (Vosloo & Jeppe 1974, p.33). This decision effectively formalised racial segregation as policy and was the first of many that further entrenched segregation, such as the 1913 Land Act that prohibited black people from owning land. This meant that they could not own property in the 93% of the country designated as white and could only acquire land in the remaining 7% - categorized as “reserves”. The allocation was increased to 13.7% in 1936 (Cameron 1993, p.418). The Native Affairs Act (1920) then created tribal based district councils; The Natives Urban Areas Act (1923) regulated the presence of blacks in urban areas by creating township on the outskirts of towns; The Local Government Act (1926) denied citizenship rights to Indians, (followed by an unsuccessful effort to repatriate them in 1927); and, The Natives Trust and Lands Act (1936) created African reserves, effectively formalising white and black rural areas (History of South Africa 2011b)

For a brief period during the Second World War, several commissions were appointed to review “native policy”. The intention was to reform the above-mentioned policies, but turned out to be “*promises rather than performance*” (Legassick 1974, 6–7), as evidenced by the passing of the Natives (Urban Areas) Consolidation Act (1945), which bound local authorities to set aside and create separate townships and hostels for the non-white population under their area of jurisdiction.

#### 4.3.2 Provincial Government

The provinces, or second tier of government, created by the South Africa Act of 1909 were a new creation. Indeed, their retention of the same borders as the original states, must not obscure the fact that they in no way retained any of their legislative powers. Rather, their coming together created a new and single legislative union, with provinces formed to deal with specific functions and administrative duties, entrusted to them by central government (Cloete 1978, p.3). The Act of Union was the country’s first constitution and created a sovereign parliament, which effectively meant it could not be challenged – Section 59 stated: “*Parliament shall have full power to make laws for the peace, order and good governance of the Union*”. Under this arrangement, if anything stood in the way of its ideology, consultation was a privilege, not a right (Craythorne 2002, p.16).

To fulfil the mandate given to them, provincial governments were given legislative authority, but their ordinances would only be of effect if they were not “repugnant” to an Act of Parliament (Government 1909, sec.86). Thus, any matter placed under provincial jurisdiction did not result in full autonomy, as they

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<sup>30</sup> Abantu (or 'Bantu' as it was used by colonists) is the Zulu word for people. The SA government replaced the word natives with bantu in the 1960s, but as the word became despised by black people due its association with apartheid the government slowly started replacing it with black from the mid-1970s – for more detail see <https://www.sahistory.org.za/article/defining-term-bantu>

were not excluded from the jurisdiction of parliament. If parliament legislated, any provincial legislation in conflict would cease to have effect (Cloete 1978, p.4). This meant that parliament, could and did, legislate different laws for each province to achieve its objectives.

Provincial authorities controlled hospitals and roads; fish and game matters; control of trade; recreation and cultural amenities; the control of local authorities; and primary and secondary education for whites. The state president also appointed an administrator for each province, whose ultimate responsibility was to ensure policies applied by provincial government were in line with those of central government.

### 4.3.3 Local Government

The formation of the Union brought together two colonial systems: Dutch and British. To simplify matters and promote cooperation, it was decided to retain the existing local system already in place, which would henceforth fall under provincial government. Thus, the creation of provincial councils, intended as a measure of local government, did not alter the existing system of local government (Cloete 1978, p.6). Central government would from time to time pass Acts impacting on local government, particularly in respect to racial segregation, but ultimate control remained with provincial government. To manage local government, each province would pass local government ordinances that provided directives regarding the powers and duties of local authorities. All provincial ordinances were subject to the approval of central government and by-laws passed were subject to the approval of the provincial administrator. Under this structure, central government could control local government affairs without dealing with them directly. Local government taxing and borrowing, accounting procedures and the appointment of key personnel, fell under provincial control. Capital projects had to report to central treasury. As there was no central department responsible for local government, individual local authorities were forced to deal with individual government departments, depending on the nature of the matter (Vosloo & Jeppe 1974). During this period, black people resided almost exclusively in rural areas where local government was well-nigh non-existent (Sithole & Mathonsi 2015, p.11).

### Period Summary

Although the Union of South Africa introduced three levels of government, it was a unitary form of state, where central government had supreme power over the entire territorial state. Under this system, all other levels of government were subordinate, owed their creation and continued existence to central government, and the powers they possessed were determined by it (Hanekom in Heymans & Tötemeyer 1988, p.17). The high level of centralization was a continuation of how things were done; and Macmillan (1917, p.17) lamented the common South African tendency towards an excess of centralisation, which resulted in local government's power and real responsibility being incomplete or non-existent. This practice would be tightened even further as the National Party (NP) implemented its political and economic ideology when it came into power.

## 4.4 The Rise and Fall of the National Party and its Grand Apartheid Project (1948-1994):

### 4.4.1 Central Government: National Party's Policy of Separate Development

Accession to power in 1948 by the newly formed NP on its apartheid manifesto to formalise "separate development" based on racial lines, marked the rise of Afrikaner nationalism. However, it is not accurate to say that the introduction of formal apartheid policies introduced white supremacy. Johnstone (1970,

p.124) notes the distinct difference between the two. Apartheid consisted of the government's racial policies and ideologies, while white supremacy is the overall power structure, which was partly maintained by apartheid. Some form of separation existed from the time white settlers arrived in 1652 and it is fair to conclude as Vosloo does, that *"in the period 1910-1948 the great majority of white South Africans, whatever their political affiliations, had accepted white supremacy as the basis of policy"* (Vosloo & Jeppe 1974, p.34). What apartheid did was to modernise and codify racism in the context of a modern state.

A consequence of the NP's uncontested rule since it first came into power in 1948, was that the executive's authority over time began superseding the legislature's. Under the Westminster model, final authority lies with a sovereign parliament, but gradually cabinet came to initiate all decisions, with parliament simply endorsing them. Although Heymans & Tötemeyer (1988, p.37) recognise that the decline of parliamentary authority is a likely outcome in many countries following the Westminster system, in South Africa it was accelerated for three reasons: First, the ruling party enjoyed an outright majority for an extended period, enabling it to influence matters in its favour. Secondly, white voters wanting to maintain their privileged position, afforded extensive authority to the executive. Finally, government was successful in convincing the white electorate that the country could come under siege at any point and that they "knew best" how to protect them; requiring a "particular style" of government. The consequence was that cabinet often took key decisions without even consulting parliament. Heymans cites invading Angola in 1975; activities to destabilise neighbouring states during the 1970s and 1980s; and declaring two states of emergencies (1985 and 1986) as key examples. By the 1980s, decision-making was highly centralised and effectively limited to the few members of the State Security Council, reporting directly to State President PW Botha, who also controlled access to it.

Before ending in 1994, the NP's administrative rule can be broken down into three phases. During the first ten years or so of power, the focus was on segregationist policies and regulations. Once this was achieved, emphasis started to shift towards a developmental phase (Vosloo & Jeppe 1974, 36–39), beginning in the late 1950s and ultimately taking the 1976 Soweto riots to convince government that existing policies were untenable. The third phase was neo-apartheid, as termed by Cameron (1993: p419): *"the 1980s saw the NP retreat from strict apartheid"*, wherein party reformers realised the need for political and economic reform, to ensure greater national stability.

#### Phase 1 Segregationist Policies (1948 -1960):

The primary segregationist outcome of maximum separation between whites and non-whites, was achieved through three ancillary objectives. The first, was to prevent further biological integration of the different races; the second, to regulate points of contact amongst races; and, thirdly, to ensure total domination of the political system by excluding all non-whites from it. Laws passed, inter alia were: the Prohibition of Mixed marriages Act (1949); Immorality Act (1950), which made mixed race sexual relations an offense; the Population Registration Act (1950), which classified individuals according to race; the Group Areas Act (1950) that segregated neighbourhoods; the Reservation of Separate Amenities Act (1953), which required races to use separate public amenities such as hospitals, transport, restaurants, theatres and the like; the Extension of University Act (1959) that required separate universities for whites; and the Industrial Conciliation Act (1956), which split workers unions along racial lines. From the mid to late 1950s, regulations were passed to end any existing participation by non-whites in political institutions (Separate Representation of Voters Act of 1956 and the Promotion of Self-Government Act of 1959). This almost endless list of punitive and inhumane laws targeting black people had significantly negative financial, logistical and social implications for local governments, who were required to enforce them with impunity. National government, which interacted with local government through the provincial

administrator, had little interest in the views and beliefs of the local community and furthermore provided almost no financial support to deal with the consequences and impacts of these laws. Sithole & Mathonsi (2015) notes that national government's view was that segregating people on racial lines, forcefully if necessary, meant that white municipalities had no obligation, and thus no financial burden, to provide services in areas inhabited by black people. This was to have long-lasting consequences for local government in future; particularly in placing local governments under immense pressure to integrate hitherto underserved black areas when they were subsumed into neighbouring previously 'whites only' municipalities under South Africa's first democratic government.

#### Phase 2 Developmental Phase (1960 -1976):

Having excluded non-whites from all spheres of political, economic and public participation, the NP government turned its attention to creating alternative opportunities for them. The objective of the developmental phase was to create separate, subordinate, national and local institutions for all non-white groups and then build social and economic development areas within non-white allocated areas. Under the Promotion of Self-Governing Act (1959), 'bantu' territories were proclaimed for the eight identified black ethnic groups (north and south Sotho, Tswana, Xhosa, Zulu, Swazi, Venda, and Tsonga - Figure 4-1). Referred to as "homelands", these territories were recognised as independent and given a measure of self-government. All black people were required to become a citizen of one of the homelands under the Bantu Homelands Citizenship Act (1970), which the Minister of Bantu Administration and Development, Mr Connie Mulder explained was: *"to enable the so-called urbanized bantu person to find a home for his political aspirations with the people to whom he belongs"*. But in truth, its purpose was to strip all blacks of their South African citizenship (History of South Africa 2011a). As no homelands existed for coloured people, they would develop in parallel, but separately, to whites in the same areas. The Coloured Persons Representatives Council (1968) was set up to manage coloured affairs - economic, education, local government, social welfare and other issues, but always subject to the approval of the state president. Schemes to repatriate Indians, of which there were many, were abandoned in 1955 and Indians were officially accepted as a population group in 1961. The South African Indian Council was established in 1964, with central government managing it in a similar manner to that of the Coloured population.

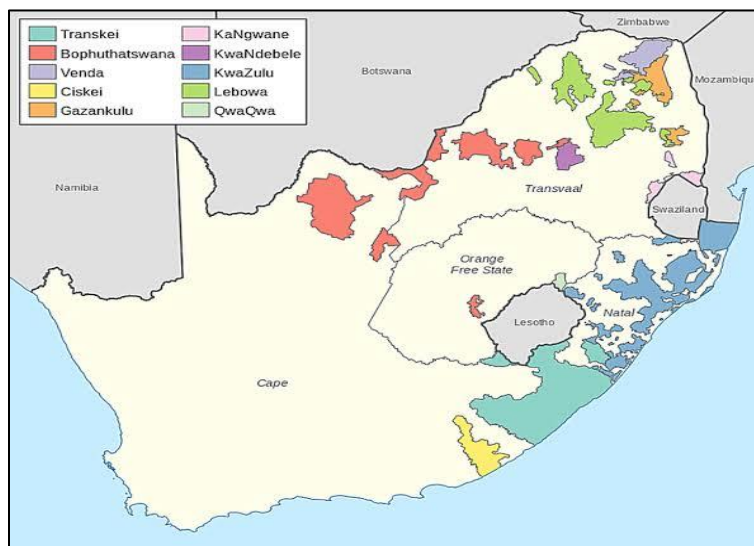


Figure 4-1: Map of South Africa before 1994, with homelands

The South African economy (analysed in Chapter 5) experienced a high growth period in the 1960s. Annual GDP growth was between 6 and 8 per cent during the 1960s. In fact, between 1962 and 1966, South Africa's real growth rate was second only to Japan (Johnstone 1970, p.124 quoting Financial Mail - 6 September, 1968. page 833). Indeed, during these "golden years", government, capital and the white population must have believed that the system of apartheid was secure and would remain unchallenged (Nieftagodien 2014).

Although spatially separated, each of the four recognised population groups fell under the direct control of a local government – all of which were created by provincial authorities who defined the scope of their local jurisdiction – with vastly disparate levels of service provision and expenditure along racial lines (Cameron 1993, p.417). The Soweto riots which took place on the 16<sup>th</sup> of June 1976, were a decisive historic turning point. Government finally realised that the Verwoerdian<sup>31</sup> myth of all Africans being "temporarily sojourners" in white urban areas was untenable (Lemon in Smith 2002, p.5). The economic and political costs of government policies were now evident, and to find solutions, several commissions of enquiries were formed: The Theron Commission (1976) identified problems of legitimacy and financial organizational viability; the Yeld Committee (1978) found financial unviability in coloured areas, while in the same year the Schlesbusch Committee suggested the political failure of the system. The Slatter Commission (1979) identified the same issues in four Indian areas in the Transvaal and Natal (Smith 2002, p.3). The Committee of Inquiry into the Finances of Local Authorities (Browne 1980) distinguished between the "need" and "ability to pay" for general and trading municipal services amongst the three population groups, where white local authorities generated large surpluses, while coloured and Indian were not; with little prospect of the situation improving over the 12 year forecast period to 1990. The inquiry attributed the coloured and Asian<sup>32</sup> communities' inability to pay, to average lower family income and higher number of persons per dwelling. It was clear that under these circumstances, viable local authorities for coloureds and Asian would not be possible and it was recommended that:

*'In order to establish viable local authorities for Coloureds and Asians, as recommended by the Yeld and Slatter Committees, a system of regular transfer payments from White to Coloured and Asian authorities should be introduced, whereby the payments would be equal to the calculated need minus the ability to pay of Coloured and Asian authorities. The necessary arrangements should be made with the Department of Finance for the ongoing calculation of such transfers, on the basis of statistics, which are collected for this purpose on a uniform basis.'*

Browne (1980, p.83)

The Browne inquiry distinguished itself from previous government reports, not because it noted the failure of the system for the first time, but because it created the basis for the creation of RSC, detailed below. Prior to Browne, the failure of the separatist system had been analysed but only noted by previous official inquiries.

The Croeser Working Group played a prominent advisory role in the 1980 formulation of the President's Council, or PC, on local and regional management systems. Many of the recommendations were legislated, resulting in the extensive reorganisation of local government (Todes & Wilkinson 1986, p.60). The PC, effectively a constitutional think tank, was first suggested by the Schlesbusch commission which

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<sup>31</sup> Hendrik Verwoerd was the South African Prime Minister who served from 1958 until 1966 (assassinated). Verwoerd was one of the primary architects of apartheid.

<sup>32</sup> The term Asian is used in the Browne report, whereas all the other sources and reference documents refer to Indian. Chinese people suffered from discrimination during apartheid, and were often classified as Coloureds, but sometimes as Asians, a category reserved for Indians. In the 1970s, in an attempt to attract foreign investment, Taiwanese Chinese, Koreans and Japanese were categorised as 'honorary whites'. Chinese people from other descent maintained their classification of Coloured or Asian.



proposed constitutional reform for the white, Indian and coloured populations (Heymans & Tötemeyer 1988, p.35). The Joint Report of the Committee for Economic Affairs and the Constitutional Committee of the President's Council on Local and Regional Management System in the Republic of South Africa was commissioned in 1982, as well as the Council for the Coordination of Local Government Affairs (CCLGA) in 1983, by the Promotion of Local Government Act. Their terms of reference were to recommend new local and regional government structures for whites, coloureds and Indians. Blacks were not included. Both councils recommended greater autonomy for local authorities, to be achieved by the delegation of power to lower levels.

### Phase 3 Neo-Apartheid (1976 – 1994) - Duplicating rather than Sharing Reticulation Infrastructure:

Under increasing international and local pressure to reform, and to stabilise the country, the NP realised that both political and economic reform was necessary. It acted by formally acknowledging and accepting the recommendations of the PC for the maximum devolution of power to local authorities as a policy priority. Reform was introduced with the Republic of South Africa Constitution Act of 1983 which abandoned the Westminster system and introduced the tricameral parliament to provide limited power-sharing to Indians and coloureds. This was based on the findings of the Theron Commission (1977) which was set up to advise on constitutional reforms. Black people were excluded, as per Section 93 (Administration of Black affairs):

*'The control and administration of Black affairs shall vest in the State President, who shall exercise all those special powers in regard to Black administration which immediately before the commencement of this Act were vested in him'* (Constitution Act 110 of 1983)

Exclusion of the black population was argued on the basis that each ethnic group had its own homeland, which Indians and coloureds did not, and that the Act addressed this shortcoming. The NP's motive however was to gain support from the coloured population, and to a lesser extent the Indian population, so as to reduce the likelihood of alliances with the black population (Cameron 1993, p.419). The tricameral system consisted of three houses: Assembly (white); Representatives (coloured); and Delegates (Indian). The Act made a distinction between "own affairs" and "general" affairs. Each house, or race group, was given the power to decide exclusively on "own affairs", made up of matters such as housing, education, health and local government. The State President retained the executive authority to decide as to whether an affair was to be classified "own" or "general" (Constitution Act 110 of 1983, sec.16(1)). Although local government fell under "own affairs", the rights and status of local government were not enshrined in the constitution and the State President reserved the right to arbitrarily change local government status from "own affairs" to "general affairs". The constitution did not apply to any existing legislation pertaining to local government, thus the structure of the new system ensured that the ruling party retained overall control. The function of local government technically became the function of central government (Cameron 1995, p.419), which would be controlled by a department of local government in each of the chambers; conditional on their financial viability:

*'Separate local authorities to be constituted for the various population groups wherever possible but subject to the requirement that effective financial arrangements should be made to ensure the viability of these authorities'* (Constitutional Guidelines 1982, p.9)

Having excluded the black population from the tricameral system, but simultaneously recognising and accepting that black people were permanent inhabitants in "white" areas, far-reaching reforms were introduced to change the status of black people within urban areas (Christopher 1997, p.318). Prior to 1982, black urban townships were administered by the national government's Bantu administration board

and provided limited services. As part of government's reform process, where devolution became a priority, Black Local Authorities Act (BLA) were created in 1982 and structured under the Black Communities Development Act of 1984, with amendments in 1986. These Acts supposedly replicated the existing government structures administering white areas, so in theory BLAs were granted the same powers and authority. This meant that BLAs were now required to operate on a cost recovery basis i.e. the principal of financial self-sufficiency applying to all local authorities (Cameron 2002; Bekker & Jeffrey 1989; Solomon 1983; Horwitz 1994). To finance themselves, local authorities raised revenue from property taxes and the provision of services, such as electricity, water and refuse removal. National grants provided as little as 4.2% of capital and operational expenditure in 1978 (Solomon 1983, p.28). It was however not realistic to even contemplate that BLAs were going to match white municipalities in their ability to fund their activities. Having almost no existing infrastructure from which to raise revenue from the provision of electricity, the higher tariffs that would have to be charged to establish an electricity distribution, would be unaffordable to these poorer residents (Horwitz 1994, p.8). The only alternative was for BLAs to significantly increase charges for rent and services. In response residents protested, boycotted payments and there was violence in many areas. Many black councillors resigned and many BLAs collapsed (Cameron 2002, p.117). Non-payment of services was not only an affordability issue, but also a form of political protest against apartheid, with residents in the BLAs viewing these structures as politically illegitimate and an extension of the policy of separate development (Tsatsire & Nealer 2009, p.137; Heymans & Tötemeyer 1988) (Poto in Heymans & Tötemeyer 1988, p.101).

National government's obsession with separate development ultimately resulted in the duplication of infrastructure, services and manpower; all of which was inefficient and expensive:

*"Among other things, the law obliged racially-based local authorities to become separate electricity supply authorities. Sometimes a new non-white supply authority was created simply by separating the electricity network of the new authority from that of the mother municipality of which it had been an integral part. The effect of this process was to separate naturally integrated networks, or for new supplies to be created irrespective of the cost of establishing these networks. But mostly, separating off the administration of black urban areas from white cities meant that black areas were left without services at all."* Horwitz (1994, p.10)

These inefficiencies were identified by the Browne Commission in 1980, which recommended the creation of a joint services commission to provide services on a cost-effective basis and advocated that local government income be redistributed to Indian and coloured communities via a system of transfer payments. Imposing a levy on white ratepayers to fund infrastructural and environmental upliftment in coloured and Indian areas was unlikely to be popular with the white electorate and could result in a loss of electoral support. Indeed, the (white) United Municipal Executive (UME) immediately opposed it (Humphries in Heymans & Tötemeyer 1988, p.109). Recognising that BLAs were not viable and in crisis, the department of finance responded by establishing the Croeser Working Group in 1982, which ratified the main findings of the Browne Commission and proposed a more complex and indirect funding model that in effect *"was little more than fiscal laundering"*. A regional services levy and regional establishment levy, to be paid by white affluent commercial and industrial sectors, was the basis of funding for the RSCs (Smith 2002, p.4).

RSCs addressed the general affairs component of the Constitution Act of 1983 and the RSC Act (1985) had three objectives: 1) To promote efficiency by providing bulk services in a more cost-efficient manner; 2) To provide a forum for multi-racial decision making; and 3) To offer new sources of income for the development of infrastructure in areas of greatest need – namely black townships (Cameron 1993, p.421) (Cameron 1993, p.5; Bekker & Jeffrey 1989). The Act made provision for 21 functions to be performed by



RSCs under the newly created Primary Local Authorities (PLAs), which effectively created a metropole. Included under these 21 functions were bulk water and electricity supply, sewerage, roads and storm water drainage and the maintenance of infrastructure, services and facilities. In 1986 it became necessary to amend the Act to include “own affairs”, because the existing Cape Divisional Councils that the RSC took over, handled both “general” and “own”; unlike in the Transvaal and Orange Free State where the RSCs were newly created bodies. RSCs were funded through two new taxes; the first being a services levy - a tax on wages and salaries of all employers in the RSC region; and the second, an establishment levy which charged a tax calculated on the turnover of a business in the RSC region. The tax rates charged were determined by the Minister of Finance and it was compulsory for the RSC to spend the proceeds on specific functions – prioritised to areas where the greatest need existed, black townships (Cameron 1993; Heymans & Tötemeyer 1988; Smith 2002; Bekker & Jeffrey 1989; Solomon 1990).

*“Perhaps the most important result of this Act will be an effective redistribution of income, wealth, development and influence in a region from white to black, coloured and Indian communities, with the direct participation of these communities.”* Financial Mail (23 August 1985).

The Department of Constitutional Development rejected the scepticism shown by many about the viability of RSCs. Du Toit (in Heymans & Tötemeyer 1988, p.75) for example questioned how RSCs could ultimately succeed, because of the racially segregated structure upon which they existed. The Department argued that race was not the issue, but access to finance, which RSCs were set up to address. The abolition of development boards, (which had a long history of disputes with local councils), and of influx control (both in 1986) were also seen by national government as additional actions to ease the political and economic programmes of BLA. This did not transpire, and the political and economic situation became increasingly unstable.

By the mid-1980s, the reforms introduced to increase the political and economic rights of all non-white citizens appeared to have had the opposite effect. There was a marked escalation in political resistance, popular and violent township protest, and rural uprising. The Botha government also had to deal with the insurgency increasing from the country’s national borders and international pressure in the form of economic and trade sanctions. On 20 July 1985, President P.W. Botha announced that violence in the country showed that “*ordinary law and order was inadequate*” (History of South Africa 2011c). A State of Emergency was declared; giving greater power to the police, the military and the president. The government could implement curfews controlling the movement of all people and prevent the media from covering any unrest or entering an area declared as an area of unrest. The state of emergency also gave the president the power to rule by decree, without constraints of the constitution or parliament. But this did little to improve the situation. Operating under a nationwide state of emergency with strict restrictions, sent the country to the precipice of civil war. The political and economic situation continued to deteriorate, characterised by violence, industrial action and international pressure to end apartheid; all of which put P W Botha under intense strain. And the pressure for actual and meaningful change was not limited to those who sympathised with the non-white majority. Within his own party, a group of reformists who realised that apartheid was no longer tenable, had formed and were led by F W de Klerk. A meeting between de Klerk and Zambian Prime Minister Kenneth Kaunda had been scheduled for August 1989, to which Botha was opposed. After a cabinet meeting, Botha announced his resignation on the 15<sup>th</sup> of August 1989. De Klerk, already the leader of the NP, won the national elections that took place 23 days on; becoming State President in September 1989. Just four months later, in his presidential speech at the opening of parliament, de Klerk announced wide ranging reforms effectively ending apartheid; heralding the country’s first democratic elections in April 1994.

Within the period from the declaration of the state of emergency by Botha, to the implementation of reforms by de Klerk, government's efforts to reform local authorities led to a major investigation into the feasibility of replacing the current legislation, which provided for different systems and structures of local government, with a uniform act i.e. to devise uniform legislation for local government. In October 1986 a committee of enquiry was appointed under Professor Stassen and work commenced in August 1987. In the foreword by Dr Thornhill, who took over as chairman in January 1989 after the resignation of Stassen, and after whom the report was named, he notes *"It became quite apparent early in the investigation that a single act for local government in South Africa would not be feasible"* and the study was extended to investigate the total system of local government (Thornhill 1990, p.4).

The report, guided by statements made on local government by the State President in May 1990, identified four models (Table 4-1):

*"Above all, any new system of local government will also have to be established through negotiation ... Any model will have to take into account the existence of various communities in the same area. It will have to be affordable and promote administrative rationalisation ... I sincerely believe that the status quo cannot be maintained. There is an inescapable need for a new system or systems of local government."*

Thornhill, p. Footnote 19 (1990, p.22 Footnote 19)

FW de Klerk as the new State President, outlined an approach for local government adopting a new dispensation. A prerequisite was that it would be negotiated by all members in the local community, to ensure there was consensus. Noting that *"too much variety could lead to chaos"* an orderly process was necessary, to avoid any disruption in the provision of local services. A general legal framework which offered a few alternative models, but within which all local communities would have to operate, would be made available, allowing a local authority to choose the most relevant model to meet its needs<sup>33</sup>.

Before presenting its proposed models, summarised in Table 4-1, the report identifies ten points of departure on which the investigation was based and suggests that these should be used as the basis for any future negotiations. Key amongst these:

- Local government is recognised as independent form and tier of government, with executive and legislative powers. The autonomous fiscal powers of local authorities are a critical determinant of local authorities;
- Elected, autonomous local government must be protected by the constitution;
- The system must ensure that it is non-discriminatory, minorities are protected and group domination is prevented. It cannot treat people differently and / or function on a racial basis;
- A new system means the maximum devolution of power and functions to the lowest effective decision-making level, with minimum administrative control from central government. This was to be done in conjunction with devolution of fiscal sources and financial responsibility, to ensure there were sufficient sources of income;
- Local authorities had to be administered efficiently and cost-effectively to ensure that *"under no circumstances the provision of essential services is disrupted"*;
- Existing and new sources of income must be used in a non-discriminatory manner to 1) Promote economic development; and 2) Eliminate historical disadvantages urgently and systematically.

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<sup>33</sup> Meeting held with the author of the report, Professor Chris Thornhill (9 March 2016)

Table 4-1: Proposed Models of Local Government – Thornhill Report 1990

Model	Description
Separate local authorities	Racially separated local authorities within own areas of jurisdiction, subject to financial viability or the extension of jurisdiction to achieve financial viability. This option effectively allowed for the continuation of the existing racially segregated model, subject to the condition of financial viability
The local services council	Based on the existing RSC model. Autonomous local authorities within the same geographical area which were not sufficiently viable, would co-operate on an equal basis on certain issues. Local authorities of all race groups could participate, but it recognised that the most likely point of departure would have to be the existing areas of jurisdiction, which at the time were on racial lines. Revenue could be sourced from the existing RSC levies and surpluses from joint services shared.
The community government model	A joint local authority for a city, with the option for local communities to establish neighbourhood management committees, on a non-racial, geographical basis, to administer common interests. This entailed devolution <b>within</b> a local authority to an institution, with the objective of participatory local government. The neighbourhood committee would only have decision making autonomy in its area of jurisdiction on own functions, as determined in the local negotiation process.
The simple majoritarian model	Dividing the city into wards which included all residential areas and all races. The division could be along financial and/or number of voters. This model could be constructed with or without the protection of minorities

The last item covered in the Thornhill report was the creation of the RSCs and the role they had played until that time. The report made comments about the future of RSCs (Thornhill 1990, 60–61), noting that RSCs would have a role to play in any new system of local government. Where a new institution of local government could not be created through negotiation, the RSC would be able to provide services to the area it served, as it functioned as an extension of local government. RSCs had important developmental goals and it was essential that their sources of income were used for this purpose. The report recognised that RSCs at that time were constituted from race-based local authorities and that this would need to change, by constituting them on the future model the local community had chosen. Finally, RSCs provided a mechanism for national government to fund projects that fell outside the local authority areas of towns and cities. The report, appraised by van Donk and Pieterse (Pillay & Du Toit 2006, 120), found it to be nothing more than a subtle attempt to re-inscribe white domination; a charge vehemently rejected by Thornhill during his interview<sup>34</sup>, pointing out that a balance had to be struck between developing non-racial local government and the political climate and ideology at the time.

Recognising that the country's major (white) cities would be significantly larger once the townships were incorporated, government re-commissioned Thornhill a year later to complete a second study on key issues relative to municipal government of metropolitan areas. With the somewhat unoriginal title of Thornhill II, the report unsurprisingly reiterated the previous report's points of departure as prerequisites for efficiency, effectiveness and legitimacy:

*"Maximum devolution of power to the lowest effective level of decision making, maximum devolution of government functions to the local government level and minimum administrative control, together with devolution of fiscal sources and financial responsibility, while the devolution of functions requires the corresponding devolution of the necessary funds and/or sources of income."* (Thornhill 1991)

<sup>34</sup> Meeting held with the author of the report, Professor Chris Thornhill (9 March 2016)

As non-negotiable pre-condition for legitimacy, metropolitan government required the equal treatment of all population groups (Thornhill 1991, p.4). The report explained that metropolitan government was a global phenomenon set up to deal with very densely populated urban areas, a situation which had now materialised in South Africa. It was necessary for the report to distinguish between RSC and metropolitan government, as both were absorbing smaller municipalities. The latter did not include rural areas and was an extension of local government, established to ensure the coordination of local government services in existing highly urbanised communities. RSCs on the other hand, were a “regional” type of local authority, created to obtain joint decision making and to re-distribute specific sources of revenue. RSC functions could be absorbed in metropolitan areas by the relevant metropolitan body, in which case the RSC would be abolished or transformed, with its income sources being transferred to the new metropolitan council (Thornhill 1991, p.40). The report identified five models: 1) Co-operative agreement – where local governments voluntarily co-operated to address issues via a technical committee on which they would be represented; 2) Councils of government – a confederal solution where a council representing local authorities would be established to deal with identified problems. The report noted that this model aligned most closely with RSC; 3) Amalgamation – suited to a large city with an adjoining region, to create a combined area; 4) Incorporation – the abolition of all existing local authorities and combining them to create a new, and much larger, metropolitan government; and 5) Two-level federation: local government duties split into two categories: straightforward functions would remain with local government, while others for reasons of efficiency or effectiveness, would be undertaken by a metropolitan government. The report felt that incorporation (Model 4) and two-tier government (Model 5) were most suited to South Africa, but once again urged that any final solution had to be the result of negotiation. Cameron (1993, p.429) states that government’s response to the second report was much the same as its response to Thornhill I. *“The findings were noted and the report circulated for comment”*. However, Thornhill disagreed<sup>35</sup>, stating that the findings of the second report formed the basis of the Local Government Transition Act (LGTA) of 1993 (Act 209 of 1993), which became entrenched in the interim constitution, ultimately leading to local government becoming an independent sphere of government.

### Period Summary

One of the final acts of the NP government may have been to finally realise its long-held policy ambition of decentralising power to local government. This shift in policy was initiated by several studies and commissions of inquiry undertaken in the late 1970s and early 1980s and led to the promulgation of the 1983 constitution, increasing the powers of black local government (Black Communities Development Act, 1984) and several other reforms - the most notable being the introduction of the RSCs. This marked a major shift from the policy of centralization which had been in effect since Union, characterised by mechanisms giving national government direct control over local authorities and indirectly through provincial administrators. The extent to which the ruling party in the early to mid-1980s was sincere about decentralization may never be known because it was in a constant state of national crisis defending apartheid. Thus, all reform measures came with central government veto power, which immediately generated mistrust, insincerity and legitimacy issues. For example, the minister of finance was responsible for setting and changing the levies which funded the RSCs. In fairness however, government rarely interfered and never with the RSCs, but its built-in safety mechanisms meant that reform programmes were regarded in the same light as all programmes introduced by an apartheid dispensation (Cameron 1993; Heymans & Tötemeyer 1988; Todes & Wilkinson 1986; Pillay & Du Toit 2006; Bekker & Tomlinson 1986; Tsatsire & Nealer 2009; Pieterse & van Donk 2008; Smith 2002; Bekker & Jeffrey 1989). The process thus lacked the most essential characteristic of effective decentralization; perceived legitimacy.

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<sup>35</sup> ibid

Attempting to implement the decentralization programme against the political backdrop of the 1980s, also meant its constant marginalisation by the need for centralized power to control civil unrest. So even though the NP's objective may well have been the decentralization of power, viewing centralised control in a post-apartheid government as a potential danger, the need to retain power received a higher priority:

*"The National Party is well aware of the enormous power wielded by a highly centralised state and is deeply concerned about the black majority assuming control of such an apparatus"*

Bekker in (Heymans & Töttemeyer 1988, p.30)

In the final analysis, the government's decentralization programme was designed by the NP in an elitist fashion to ensure that although it shared power, it retained control (Cameron 1995, p.412). Ultimately, the programme delivered little devolution and was limited to deconcentration and delegation (Cameron 2002, p.119).

#### 4.4.2 Provincial Government – Towing the (National) Party Line

The first order of business for the NP after winning the 1948 elections was to consolidate its position by centralising state control. This was not straightforward, as the election was won by a minority, resulting in the NP ruling through a coalition in parliament. The party had no governing experience and faced significant resistance from opposition parties in the bigger cities (Adler 1990, p.168). Once the NP secured majority control at national and local level however, it restructured provincial government to comprise of three elements: an administrator, an executive committee, and a provincial council. The administrator was appointed and dismissed by central government; the executive committee was elected by the provincial council, and from 1970, provincial elections were held simultaneously with general elections, electing the same number of representatives for each province's council, as that province had members of parliament (MPs). Provinces presided over local authorities, who they regulated and controlled through provincial ordinances (Young 1990, p.223). This structure allowed national government to have its policies implemented with minimum interaction between it and local government. Fundamentally, the provincial administrator was local government's decisionmaker.

*"Nearly all decisions taken by a local authority have to be agreed to by the Administrator. All regulations, all changes to town planning schemes, even the staff regulations of a municipality must have his approval."*  
(Rees in Various 1979, p.5)

Provinces oversaw local government finances, where strict control was exercised in line with national government requirements. The close relationship that provinces held with the national government did not however mean that they enjoyed any additional privileges. All power resided in the centre. This was achieved by curbing almost all provincial taxing abilities, making them almost exclusively reliant on funding transfers. In 1971 a new subsidy formula was announced, with provincial powers to levy personal and income tax being transferred to central government, while its contribution to provincial expenditure was raised to 82%. The loss of financial autonomy was supposedly compensated by central government not imposing conditions as to the purposes for which the financial grants could be spent (Vosloo & Jeppe 1974). An additional example of national government constantly undermining its stated policy priority of devolution, was the decision by the National Treasury to supplant the provincial authorities of their oversight role of local government finances in the mid-1980s; citing local government inefficiency as key

reason, which if left unchecked could lead to excessive inflation that could “*break the back of the economy*” (Cameron 2002, p.119).

#### 4.4.3 Local Government – White Local Authorities (WLA)

From Union in 1910, local government structures in South Africa were designed to institute the national policies of the ruling government in the urban environment (Tsatsire & Nealer 2009, p.133). To deliver on its election manifesto of separate development after coming to power in 1948 – which had to in effect be implemented at local government level – the NP moved quickly to centralise the powers and functions of local government even further. Existing regulations were repealed and replaced with new legislation to separate the different cultural groups. The few non-white councillors in the Cape Province were not going to continue under apartheid, and were removed by splitting the voters’ role and placing them in newly created and inherently powerless management committees (Craythorne 2006, p.10).

The new government also oversaw the expansion, bureaucratisation and consolidation of power of the civil service in the 1950s. This was in line with international economic thinking of Keynesian theory, advocating an interventionist state. This policy had already started prior to the 1948 elections and would probably have been ramped up regardless of election outcome, but the NP now added its segregationist flavour. A policy of preferential access to jobs for white Afrikaners was installed, resulting in a gradual deterioration in the capacities and skills of the civil service, as powers were given to increasingly incompetent and less qualified personnel. Afrikaners at the time were (significantly) less educated than their English-speaking white colleagues, and the NP’s policy of job reservation successfully sought to evict English speakers, as experienced and skilled people left the public for the private sector. The situation came to a head when in parliament in 1968, the official opposition noted “*the virtual collapse of administration in many spheres*”. Other findings included critical staff shortages in the National Treasury and important government departments, with countless instances of under qualified individuals in senior positions. National government committed to acting, but ultimately nothing was done (Posel 1999, pp.100–105); and the Association of Municipal Electricity Undertaking conference minutes during this time, raised management concerns management about losing staff, many of whom considered taking positions at their counterparts in Rhodesia (AMEU Minutes 1950 – 1960). Curiously however, favouritism shown in hiring Afrikaners in the public sector, by no means implied that these jobs came with privileges.

*“Despite the placing of Afrikaners in the ‘sheltered employment’ on a large scale in the civil service after 1948, the government that made the appointments lorded it (sic) over the employees, often treating them with contempt.”*  
Posel (1999, p.99)

In 1961, when unilaterally seceding from the British Commonwealth, government changed South Africa from monarchy to republic. The new constitution (Constitution Act 1961) was the country’s second and retained the existing levels of government – the two tiers of national and provincial government – with provincial councils retaining the powers to make ordinances in relation to classes of subjects, which amongst others included: municipal institutions, divisional councils and other local institutions of a similar nature (Constitution Act 1961, sec.84f(i)). Thus, local government powers, rights and functions were not guaranteed under the constitution and control of local government continued to fall under one of the four provincial administrations, each with its own ordinances. And while the form and structure of WLA was largely based on the British system, it evolved somewhat differently, due to the young age of the

cities, racial legislation, the power that provinces held over local government and the lack of skilled labour (Hammond-Tooke 1977, 9–13).

By the 1970s, the objectives and functions of a typical large municipality in South Africa could be grouped by Hammond-Tooke into four categories (Table 4-2) - representative of all large municipalities in the country in 1977, with some minor regional differences. For example, Johannesburg operated a municipal public transport service, still in effect in 2015, whereas Cape Town's always outsourced the function.

Table 4-2: Objectives and Functions of Municipalities (1977)

Category 1: Social Objectives	Category 2: Physical Objectives
<ul style="list-style-type: none"> <li>•Protecting public health – health, food, water, noise and air pollution, dumping, litter</li> <li>•Refuse: Removal, treatment and disposal</li> <li>•Slums: Housing unfit for human living</li> <li>• Health: Facilities</li> <li>•Cultural facilities: Libraries, museums, theatre, galleries</li> <li>•Recreational facilities: swimming pools, sports fields etc.</li> <li>•Parks: Open spaces, nature reserves</li> <li>•Aesthetics: Control advertising, masts, buildings</li> <li>•Heritage: Protect historical, architectural</li> <li>•Emergency services: Firefighting and ambulance</li> </ul>	<ul style="list-style-type: none"> <li>•Housing: Local authority housing schemes</li> <li>•Infrastructure (roads and water): All aspects</li> <li>•Town planning: Zoning and uses for land</li> <li>•Urban renewal schemes: Planning and execution</li> <li>•By-laws: Safety and resident interests</li> <li>•Water: Supply and distribution of water</li> <li>•Electricity: Supply and distribution</li> <li>•Transport: Bus and other forms</li> <li>•Parking: Control of traffic, safety and provision of parking</li> <li>•Markets: Fresh produce etc.</li> <li>•Licenses: Control of licenses motor vehicles, animals</li> <li>•Crematoria and cemeteries</li> </ul>
Category 3: Financial	Category 4: General
<ul style="list-style-type: none"> <li>•Revenue: Set and collect rates, tariffs, fees and loans</li> <li>•Budget: Expenditure and allocation of priorities in spending</li> <li>•Grants: In support of services</li> <li>•Land: Acquisition, selling or leasing of land</li> </ul>	<ul style="list-style-type: none"> <li>•Training: Municipal staff</li> <li>•Polling: Delimitation of wards</li> <li>•Representation: Inter-government cooperation</li> </ul>

Source: Hammond-Tooke (1977)

Notable omissions from the list of functions were education (primary, secondary and tertiary), hospitals (including child welfare, addiction, the aged) and police. Table 4-3 lists their status in 1977. This arrangement remained intact until the 1996 constitution, which came into effect after the country's first democratic elections and covered in greater detail in later sections.

Table 4-3: Non-Municipal Functions (1977)

Function	Responsibility
Primary and secondary school	Provincial
Tertiary (colleges and universities)	National (Department of National Education)
Hospitals	Provincial Preventative (inoculations, awareness etc.) - Local
Hospitals (welfare)	National (Department of Social Welfare)
Police	National
Abattoirs	Provincial
Non-white race groups	Matters dealt exclusively by respective national government as per central policy

Source: Adapted from Hammond-Tooke (1977)

#### 4.4.4 Local Government – Black Local Authorities (BLA)

As stated in 3.3.1, legislation of the Union of South Africa increasingly classified communities along racial lines. The Black Urban Areas Act of 1923 allowed for segregated urban areas and required black advisory committees to advise WLA responsible for administering black townships. The black advisory committees had no powers to act and all decisions affecting the townships were made jointly by the WLA and the national department of native affairs. From 1923 blacks were also: Only allowed into white areas for labour purposes; required to live in segregated areas; not allowed to own property and categorised as “temporary” visitors in white areas. Also, as township housing was regarded as “temporary”, it was sub-standard. This did not stop blacks from moving to white urban areas and residing in townships to seek employment, as conditions were far worse in the homelands. Forced to address the permanent nature of occupation, the NP passed the Group Areas Act (1950) which allocated residential areas by race. But government insisted that each area populated by a different race group be governed and administered separately, even if that meant municipal services overlapped or were duplicated.

Replacing the advisory committees, Bantu Councils were created in 1961, with the only difference being that in the new structure, WLAs were in charge and delegated powers. In 1971, national government took the administration of the councils away from WLAs and gave it to the newly created Bantu Affairs Administration Boards, which black councils had the option of joining. Taxation and finance remained with the WLAs, meaning that townships had no economic activity and thus little revenue to build infrastructure and provide services. The black community in the townships mobilised in protest. Black civic organizations which had by now formed, successfully convinced residents not to pay rent or service charges, making townships financially unsustainable. Finally, national government introduced the BLAs (Black Local Authorities Act 102 of 1982) that reported to the respective provincial administrator, with policy in the form of legislation coming from central government, and the principle of financial self-sufficiency applying. Trading licenses were not issued for townships, so all economic activity took place in white controlled areas, meaning taxes were exported to these. This left BLAs to survive through revenue from sorghum beer production, liquor sales in the townships, levies on white employers of black labour in some areas, and residents’ payments for services rendered, mainly rentals and fees. With black people not allowed to own property, a property tax could not be charged and BLAs were doomed from the start. Without a tax base to collect revenue to administer the township, services were sub-standard at best. More importantly BLAs had no legitimacy with the local population and were rejected outright. By the early to mid-1980s their officials were violently attacked on numerous occasions and their structures effectively collapsed (Tsatsire & Nealer 2009, pp.134–140) (Cameron 1995, p.300).

Within this context, RSC revenue was used to provide much needed infrastructure to the areas where it was needed most, in the hope that it would appease black sentiment. And even though RSC funds did find their way to the intended recipients, with over 80% of the annual budgets of the various RSCs spent in black areas (Cameron 1993, p.424), problems persisted. The inability of BLAs to generate meaningful revenue meant that a greater proportion of the funding had to be allocated to subsidize BLA operations, or more accurately to keep bailing them out, which reduced capital infrastructure spend. More importantly however:



*“...they were not able to address the fundamental structural failings of apartheid local government and were therefore subject to political opposition from the majority of the black population”*

Pycroft (1996, p.237)

Regardless of these drawbacks, the RSC mechanism proved to be resilient and levies used to fund local government were only eliminated in 2005, more than 10 years after the first democratic elections of 1994.

## 4.5 A New Constitution, Spheres of Government and Democracy (1993-1996)

By 1990, the NP had committed to democratic elections and the negotiation of a new constitution with all political parties. A first, or interim, constitution was negotiated in 1992 and 1993 (Constitution of the Republic of South Africa Act of 1993) which came into effect later that year. This interim constitution was developed to support the transformation period needed to end apartheid, and would be the basis for a final constitution - The Constitution of the Republic of South Africa Act 108 of 1996, which was adopted on the 8<sup>th</sup> of May 1996.

### 4.5.1 Interim Constitution

The NP insisted on constitutional power-sharing to protect minority rights – allowing for a government of national unity (GNU), wherein political parties gaining more than 20 seats in the national assembly would receive cabinet seats. The GNU was formed after the April 1994 national elections and would exist until a final constitution had been agreed. The interim constitution made provision for a three-tier system of national, provincial and local government, as well as nine provinces to replace the existing four.

The NP's strategy to protect minority interests, and more specifically its white electorate's interests, was manifested through maximum decentralisation to local government. Realising that it would lose the national elections, strong local government could provide some checks and balances of black controlled government by winning local elections in existing and economically influential WLAs. The African National Congress (ANC) ideology, on the other hand called for a highly centralised approach, which it believed was a more effective form of administration. A centralised approach was also seen as a mechanism more likely to ensure redistribution of wealth and reversal of apartheid inequities.

Ultimately, the ANC and NP compromised, but the interim constitution provided for autonomous local government. Key select outcomes of the interim constitution affecting local government, included: 1) Historic debts of BLAs and individual debt being written off, on the understanding that black civic organisations would encourage residents to resume payments. This did not materialise, and payment levels actually decreased after the agreement; 2) Existing local government funding instruments - the power to levy property rates, fees, taxes and tariffs - as well as receive inter-governmental grants, remained; 3) The powers and functions of the RSCs would continue (Cameron 1996).

#### 4.5.2 Final Constitution

*'The Constitution is the supreme law of the republic, law or conduct inconsistent with it is invalid, and the obligations imposed by it must be fulfilled'*

Constitution of the Republic of South Africa, 1996

The mutually agreed interim constitution allowed for national elections and a transition towards full democracy, with the requirement that a final constitution, voted in by a two-thirds majority, had to be put in place within two years. The drafting of the final constitution still allowed for public and other interested parties (technical experts, lawyers and academics) to participate, but in reality, unless these submissions aligned with the major political parties, and the ANC in particular, they had little influence on the final outcome (Cameron 1997, p.2). The drafting of the final constitution focused on outstanding issues, such as sections rejected by the constitutional court as being inadequate. This included the chapter on local government which was deemed to be too long and vague.

The final constitution adopted the principle of co-operative government (Chapter 3: Section 40), where government consists of three spheres (national, provincial and local) which are *"distinctive, interdependent and interrelated"*. Section 41 states, *inter alia*, that all three spheres must:

- Respect the constitutional status, institutions, powers and functions of government in the other spheres;
- Not assume any power or function except those conferred on them in terms of the constitution;
- Exercise their powers and perform their functions in a manner that does not encroach on the geographical, functional or institutional integrity of government in another sphere; and
- Co-operate with one another in mutual trust and good faith by:
  - Assisting and supporting one another;
  - Informing one another of, and consulting one another on, matters of common interest;
  - Co-ordinating their actions and legislation with one another;
  - Adhering to agreed procedures; and
  - Avoiding legal proceedings against one another.

The concept of co-operative governance was not included in the interim constitution; representing a fundamental shift away from the three-level hierarchical inter-governmental system in place since 1910, which had ultimately put municipal function under the authority of the provinces. Henceforth, municipalities were ubiquitous over the entire territory of the Republic, each with the *"right to govern, on its own initiative, the local affairs of its community, subject to national and provincial legislation"* (Section 151.1 and 3). The next section (152.1b), lists one of local government's key objectives as: *"to ensure the provision of services to communities in a sustainable manner."* Local government objectives are further protected in Section 151.4 which states that national or provincial government may not impede or compromise a municipality's ability or right to exercise its powers or perform its functions and must support and strengthen its functions so it can perform its duties (Section 154.1). Section 156.1 then gives local government the executive authority to administer services listed in Part B of Schedule 4 and Part B of Schedule 5, which include electricity and gas reticulation (Schedule 4 Part B). The net effect was that local government has constitutionally guaranteed functions; and electricity reticulation was one.

Although provision was made for inter-governmental grants from national to provincial and local government, the principle of self-financing for local government was maintained. Section 229 (municipal fiscal powers and functions) thus allows municipalities to impose:

- Rates on property and surcharges on fees for services provided by or on behalf of the municipality; and
- If authorised by national legislation, other taxes, levies and duties appropriate to local government or to the category of local government into which that municipality falls; but no municipality may impose income tax, value-added tax, general sales tax or customs duty.

The NP continued to push for maximum decentralisation, contrary to ANC ideology, and with the ANC acutely aware it was about to inherit highly centralised government structures and could immediately proceed with implementing its redistribution programmes. The question thus arises: Why did the ANC support the elevation of local government in the final constitution to the extent that it did? Cameron (2001, p.110), citing Yacoob, points to the emergence of a local government empowerment lobby during negotiations; and with the ANC securing the 1994 national elections, the pro-local government lobby within its ranks, was supported by strong technical arguments, and of course the existing view of the NP; now the official opposition. Reflecting on the local government chapter of the constitution, Zac Yacoob<sup>36</sup> explains it is as *'a settlement, not between political parties, but a settlement between different tendencies which existed in all political parties'*. Cameron expounds on the factors of change in ANC policy. Firstly, with the creation of non-racial boundaries, the threat of many white controlled municipalities had largely dissipated. Secondly, cities could not be seen merely as service delivery agents. The bulk of the country's GDP is generated within cities, requiring them to foster cultural, economic and social development. A third reason was that strong local government allowed for greater public participation as a means of empowerment; in line with the objectives of the constitution, which calls for participatory governance. The fourth reason seems self-serving: The ANC won seven of the nine available provinces in the 1994 elections, but took control of most of cities and towns in the remaining two, with strong support in urban centres; so strengthening local government appears to be a mechanism to strengthen its own political powerbase. Finally, the decision to consolidate the country into nine provinces from the previous four, meant provinces were entirely new creations, with limited or no administrative capacity; and even though local government itself went through a disruptive reorganisation, it was in a better state than provincial administrations. The limited capacity of provinces also contributed to the thinking around defining municipalities' jurisdictional ambit, when the final constitution was drawn up.

## 4.6 New Beginnings? (1997 -2014)

### 4.6.1 Establishing Democratic and Decentralised Local Government

With the establishment of the framework for a new constitutional process and a transition to national democratic elections, focus shifted to local government. Removing well entrenched, decades-old structures, was not seen as a straightforward task. Communities were clustered along racial lines, as were services and local government skills. Transforming local government would require the demarcation of

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<sup>36</sup> Zakeria Mohammed "Zak" Yacoob (born 3 March 1948) is an anti-apartheid activist and a former Justice of the Constitutional Court of South Africa. He was appointed to the bench in 1998 by Nelson Mandela. Yacoob was one of the seven members of the Independent Panel of Constitutional Experts. The panel was established in terms of section 72 of the interim constitution, with the mandate to advise the Constitutional Assembly and chairpersons of Theme Committees, and resolve disagreements (Court n.d.)

existing municipal boundaries to make them inclusive and representative, and to redistribute political power. Such a process would inevitably result in winners and losers, making it a highly emotional and contested issue.

The Local Government Negotiating Forum (LGNF) was created in 1992 and led to the Local Government Transition Act (1993), which established a national framework adopting a three-phase approach for the transition of local government. The phases were anchored around the 1995 and 2000 local government elections (Pillay & Du Toit 2006; Tsatsire & Nealer 2009; Pycroft 1996). Cameron (2001) summarises the three phases as follows:

- Pre-interim phase: Covered the period between the first national elections in 1995 and the first local government elections in 1995/6;
- Interim phase: Began after the first local government elections and ended once the final constitutional model for local government had been implemented in 1997;
- Final phase: Began after the final constitutional model in 1997, to prepare for the 2000 elections, which would require the identification of the three municipality types as defined in the final constitution (1996).

Under the 1996 constitution, Category A municipalities have exclusive municipal executive and legislative authority in their area of jurisdiction. Category B municipalities share municipal executive and legislative authority with a Category C municipality, within whose area it falls. Category C has municipal executive and legislative authority in an area that has more than one municipality (more detail on the operational structure of municipalities is provided later in this chapter). This more flexible approach was borne out of several disputes taking place under the interim constitution, which had espoused fixed categories of metropolitan, urban and rural local governments (Cameron & Alvarez 2006, 4–6).

#### 4.6.2 RDP and GEAR

The Reconstruction and Development Programme (RDP) was adopted by the government of national unity after the 1994 elections, to address issues of social inequality and justice; intended as an integrated and sustainable programme, to be implemented by civil society. The plan was structured so as to balance the funding needed to pay for urgent and very necessary reconstruction and development, with the imperative of growing the economy to provide the financial resources needed to pay for the programme.

Here, the RDP gave local government an expansive mandate to meet its primary objectives, such as a single tax base, participatory government, cross subsidisation of local government and the cancellation of outstanding debts owed by BLAs. The white paper on local government consolidated RDP principles into a vision for the development of local government (Powell 2012, p.14).

Just two years later, the ANC introduced the Growth Employment and Redistribution (GEAR) initiative, whose stated objective was to build on, and not replace, the principles of the RDP (Manuel 2006) (Gelb 2006, p.2). This viewpoint has however been hotly debated, with GEAR seen as having a far more centrist economic foundation and being yet another, further, move away from the ANC's left of centre ideology (Weeks 1999, p.796). GEAR's five-year programme targeted a GDP growth rate of 6% in its final year, with an average of 4.2% over this period (1996 - 2000) - the minimum rate needed to construct a competitive economy required to create 400 000 jobs per annum, address inequality and extend service delivery. The economic policy of GEAR explicitly emphasised fiscal austerity, deficit reduction, pegging taxation and

expenditure as fixed proportions of GDP, cutting back on government consumption expenditure and for wage increases to be kept in check. The state would henceforth take a stronger role in coordinating fiscal and budget policy. GEAR would reform the budget process, intergovernmental fiscal system, financial management and accounting practises over its five-year duration. Capital payments to municipalities were fused into the Consolidated Municipal Infrastructure Programme (1996) and the equitable share formula for local government introduced in 1998, was to be used to fund the roll-out of services to indigent households. The changes to municipal finance under GEAR were introduced simultaneously with the drafting of the white paper on local government (Powell 2012; Weeks 1999).

#### 4.6.3 Green and White Papers on Local Government

Introducing democracy to local government would require a complete overhaul of the existing system. This could not be achieved all at once, and certainly not in a fragmented and dysfunctional system. Maintaining stability was required for negotiations to take place, so it was essential that service provision continue. This provided justification for all existing legislation to be maintained until abolished or amended (Thornhill 2008, p.494). The transformation process was not straightforward or quick. It required a review and assessment of the existing situation, the identification of items to be addressed and then, the formulation of policy to achieve the desired objectives. Typically, such a process consists of five-stage process: Stage 1 requires the ruling party to decide on the overall vision, goals and direction of key issues. Stage 2 then requires the relevant ministry to formulate green and white<sup>37</sup> papers. Stage 3 necessitates that the green paper be debated in parliament; and only once consensus is reached can a white paper be issued by the ministry. In stage 4, the appropriate ministry formulates law (bill) to achieve the white paper policy objectives. The draft bill is then reviewed by parliament, the public and cabinet. Only when the final bill is signed by the president, does it become law. The fifth and final stage is implementation and/or subordinate legislation to provide further detail; with all three spheres of government responsible for implementing government policy. The green paper on local government was released in October 1997.

*“The next local elections, to be held in 1999, will usher in the final phase and signal the start of the transition process. The white paper will therefore not only establish what local government will look like after 1999, but it will also indicate what systems, institutions and practices require to be put in place in preparation for the final phase.”*

Foreword by Minister Moosa, (Green Paper on Local Government 1997)

With the 1999 local elections fast approaching, the ministry had limited time to consider and adopt public comments. In its response, the Centre for Development and Enterprise (CDE 1997) stated: *“It is difficult to make well informed comment on these (issues raised by the paper) in the short time allowed for public comment since its release”*. Indeed, the white paper was released in March 1998, just six months after the green paper; and its intention was transforming local government. So, it is necessary to understand what was envisaged, before attempting to assess the outcome.

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<sup>37</sup> A remnant of the British system, a green paper is a discussion document developed by government and experts and identifies key issues as well as proposing alternatives. Once accepted, a white paper is issued which is a statement of intent and detailed policy plan.

## Developmental Local Government

The constitution commits to improving people's lives, within its available resources. The white paper thus set out developmental government as a vehicle to help address past inequalities, and saw this as the new role local government was expected to play (Nel 2001, p.1011). Four developmental outcomes were identified: 1) The provision of household infrastructure and services; 2) Creation of liveable integrated cities, towns and rural areas; 3) Local economic development; and 4) Community empowerment and distribution. The first outcome dealt with the traditional functions of local government; service delivery, while the remaining three were new additions. The white paper's intention on services (Local Government White Paper, 1998. 27) is of primary relevance to this study and therefore interrogated in more detail.

The White Paper recognised local government's obligation and responsibility to provide household infrastructure and services. It specifically names water, sanitation, local roads, storm-water drainage, refuse collection and electricity as the services which would improve people's lives and foster opportunity to become productive members of society. The priority and starting point was the provision of basic services to those who had little or no access to them. The envisaged funding for these capital projects would come from grants from the consolidated municipal infrastructure programme, cross-subsidisation of existing services and private sector involvement. Operational costs would be financed from the equitable share of national revenue to which local government is entitled. To ensure sustainability, the level of investment would need to match the ability of the various communities to pay for these services. Transforming local government to meet service delivery requirements required new approaches and mechanisms, summarised in

Table 4-4.

Table 4-4: Summary of administrative systems to meet service delivery requirements – White Paper on Local Government (1998)

<b>Guideline</b>	<b>Action Points / Items to Consider</b>
Principles for service delivery	<ul style="list-style-type: none"> <li>• Accessible to all, easy and convenient to use</li> <li>• Setting appropriate tariffs, determining appropriate service levels, and cross-subsidisation</li> <li>• Suitability, ease of use, timely, responsiveness, convenience and safety</li> <li>• Council responsible for quality, affordability and accessibility</li> <li>• Holistic approach to address other policy objectives</li> <li>• Financial, environmental and social sustainability</li> <li>• Effective and efficient usage of resources</li> <li>• Service costs must not disadvantage business to subsidise domestic users. Transparent rates must be provided</li> <li>• Must comply to constitutional principles which govern public administration</li> </ul>
Approaches to service delivery	<ul style="list-style-type: none"> <li>• Recognising that existing capacity is white (schooled in rigid authoritarian and outdated management practises), together with the need for transformation (available but under-skilled black human resources), mechanisms for reform and performance improvement to address these shortcomings, are outlined</li> <li>• Separation of service delivery units from the council to increase accountability</li> <li>• Horizontal cooperation between municipalities</li> <li>• Access external expertise and experience through partnerships</li> <li>• In sourcing, external specialised services, but not solely based on price. Must consider training, employment, quality, health and safety</li> <li>• Public-private partnerships are suited to large-scale capital investment projects, where: project is long term; partner invests in and maintains equipment; and municipal risk is decreased</li> <li>• Privatisation not allowed for core municipal services and specifically water, electricity and waste.</li> </ul>
Service delivery options	Municipalities should focus on finding the most appropriate combination of options to meet their policy objectives, and should align with their integrated development planning
Administrative capacities to support development	<p>To be effective, municipalities must develop the following capacities:</p> <ul style="list-style-type: none"> <li>• Strategic: Ability to address additional or new demands with a flexible and open approach</li> <li>• Integrating: Directing capacity and resources from inside and outside</li> <li>• Community: Understanding their needs to ensure they are relevant but must meet quality standards</li> </ul>
Training	The existing system, controlled by two boards, is outdated and ineffective. A new flexible training system is being designed. Henceforth, councillor training is the responsibility of SALGA
Labour Relations	The need to transform and create a motivated workforce is recognised, but labour interests cannot supersede service delivery. The SA Local Government Bargaining Council is seen as the designated forum to manage the relationship between labour, management and councils
Other spheres of	National government wishes to avoid prescriptive approaches, but constitutionally can intervene if required

**Source:** Local Government (1998)

Achieving the four developmental outcomes would require significant changes, and the white paper identified three interrelated approaches to assist municipalities: integrated development planning (IDP) and budgeting; performance management; and working together with local citizens and partners.

The first tool, IDPs, is a mechanism for short, medium and long-term planning. IDPs are incremental plans which recognise that not everything can be planned in year 1 and that circumstances change. They provide a comprehensive framework for municipalities to identify and plan their developmental mandates. The paper states unequivocally that IDPs must be developed and managed internally, so as to strengthen strategic planning, build organizational partnerships between management and labour, and enhance synergy between line functions.

Performance management is a mechanism to ensure that plans are being implemented, are having the desired impact and resources are used efficiently. Both national (fixed) and local (relevant) key performance indicators are proposed; providing national government an assessment tool of how local government is performing.

The third and final tool, working with local citizens and partners, is a key tenet of decentralization that the paper recognises. *“Building local democracy is a central role of local government, and municipalities ....*



*continuously engage with citizens, business and community groups.”* Four different levels of interaction with the electorate and stakeholders were identified: political accountability (voters); input into planning processes (citizens); quality and affordable services (consumers); and mobilising resources and providing assistance (partners).

### Co-operative Government

The white paper reinforced local government’s elevation to a sphere of government, no longer subordinate to, and a function of, national and provincial government. The paper recognised the complex nature of government and the need to strike a balance between independence and cooperation. It went on to outline the roles and responsibilities of the national and provincial spheres in their dealings with local government, which if leveraged would strengthen local government to fulfil its mandate. The expectation of the paper was that programmes undertaken by the other two spheres would be implemented in a manner that would help build local government capacity (Siddle 2011, p.70). Conversely, the ability, and the circumstances under which national and provincial government have the constitutional authority to intervene in the instance of non-performance were clearly outlined. The paper also advocated cooperation between municipalities.

National policies from various ministries were summarised, to provide an overview of the country’s policy direction and the impact this would have on local government, as – “*...local government is increasingly being seen as a point of integration and coordination for the delivery of national programmes*” (page 9). Allocating functions and services to local government also demonstrated how government intended to execute its policy of decentralisation. Section 2 of the Paper (ibid, pages 40 – 47) outlines national and provincial initiatives to improve conditions for South Africans; the most relevant of which for this study was the one provided for the Department of Minerals and Energy (DME). The proposed transformation of the electricity industry was noted, and more specifically, how this reform would impact on municipal and Eskom reticulation activities. The allocation of reticulation, as it has developed over many years, had created the situation where both (Eskom and relevant municipal electricity undertaking) reticulated to different parts of the same municipality. In addition, many municipalities were losing their licences due to their inability to pay Eskom their bulk electricity supply accounts. The envisaged regional electricity distributors (REDs) would combine Eskom and municipal reticulation into autonomous structures. The reliance that all, but especially the larger, municipalities had on electricity sales for revenue, cash flow and the well-established practise of cross-subsidising non-viable municipal services from “*municipalities profits on electricity supply*”, was recognised. To compensate for this loss of revenue, the paper envisaged that “*Municipalities will be allowed to levy a tax on the sale of electricity which should in aggregate improve their income from electricity*” (ibid, page 45). However, it was conceded that the loss of the asset base would negatively impact their credit ratings and borrowing ability. The summary concluded by stating that the details of the proposed restructure were still being discussed and that local government must participate to ensure its interests are represented.

#### 4.6.4 Assessment of the Local Government White Paper

The white paper was keenly anticipated, but once examined, most felt that although it was well-written, it failed to recognise the magnitude of the task at hand and did not provide an adequately detailed policy framework for municipalities to adopt their most basic objective – service delivery. On the positive side, the paper was recognised for undergoing an open process of consultation (notwithstanding that it was



rushed and short); being articulate; providing a complete overview of local government under apartheid; being ambitious and holistic in the way it encompassed multiple issues; for its call to simplify municipal processes; the recognised need to monitor delivery by instituting performance management of staff; and for ultimately providing national government with a vision for local government, which in turn influenced future municipal legislation (Craythorne 2006; Bernstein 1998; Venter 2007; Pieterse & van Donk 2008; Pieterse 2002). Critique was far more detailed and scathing.

The biggest criticism was that the paper failed to acknowledge local government's state of crisis; and on that basis, it would be difficult to deliver on the proposed outcomes, let alone provision of basic services to municipalities' inhabitants. And although the paper raised and recognised many of the issues plaguing local government, the concluding statements to each showed little appreciation for the magnitude of the problem: On finance (17), *"...and many municipalities are financially stable and healthy despite these problems"*. On administration (17) it conceded that *"front line workers remain deskilled and disempowered"* but failed to provide a solution other than that support and investment is required. The glossing over of fundamental weaknesses in local government prompted strong words. (Simkins 1998) published an article titled *"Paper a muddled response to critical queries"*, focusing on its financial aspects and articulating the failings; concluding that an opportunity was missed. Bernstein (1998, p.302) found the description of the state of local government finance *"casual and inadequate"*. Savage (2008, p.288), recognises the failings of the paper and pointed to: a lack of available data at the time; it not being possible to fully anticipate the effects of the transformation programme, and policy debates reflecting *"irresolvable tensions"*. On development, the policy messages were *"contradictory and lacking in substance"* (Schmidt 2008, p.22). Comparing his analyses of democratic decentralization programmes in countries in Africa, Asia, Eastern Europe and South America, Manor (2001, p.8) states that he has *"never seen such a wildly unrealistic set of tasks imposed upon local authorities"*. The most damning conclusion drawn was that the white paper and comments by national ministers at the time, *"de-elevated"* local government from a sphere to a tier; encouraging centralisation rather than decentralisation of power and functions (Bernstein 1998; Siddle 2011; Schmidt 2008; Manor 2001).

#### 4.6.5 Performance of Local Government from 1998

##### Restructuring Local Government

The first order of business was to restructure boundaries. The Municipal Demarcation and Municipal Structures Act (27 and 177 of 1998) was passed, wherein Act 27 created a demarcation board to determine the boundaries of new municipalities (284 were created) and Act 177 established structural, political and functional institutions for metropolitan, district and local municipalities. To meet the requirements of the constitution (1996), which called for *"wall to wall"* municipalities, three categories of municipalities were introduced:

- Single tier - Category A municipalities (Metropolitan Municipalities). A metropolitan municipality has exclusive municipal executive and legislative authority in its area; and
- Two tier local government in Category B (Local Municipalities) and C (District Municipalities), where C municipality shares jurisdiction with several category B municipalities.

Figure 4-2 shows the country's provincial and district borders and the eight metropolitan municipalities (Category A). Table 4-5 lists the categories and number of municipalities. Table 4-5 and Figure 4-2 show the status after the 2011 municipal elections, which largely reflects the original number of municipalities created in 1998, with the only major difference being that of Mangaung and Buffalo City in 2011.

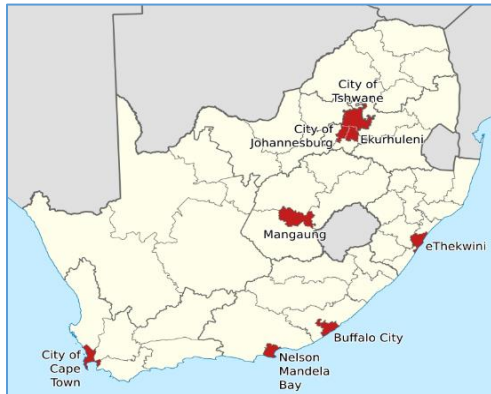


Figure 4-2: Map of South Africa with 8 metropolitan municipalities, provincial and district borders (2011)

Table 4-5: Categories of Municipalities (2011)

Category	Number	Notes
A	8	Largest cities >500k inhabitants
B	226	Fall into districts & share power and functions with them
C	44	Cover entire country (excluding metros) approximately 4-6 Category B municipalities in each district
Objective of Category A and B is to ensure that communities, especially disadvantaged ones have access to goods and services		

As early as 1998, local government policy and institutions demonstrated the friction of competing national objectives. While the constitution and RDP mandated local government to undertake capital infrastructure spending for service delivery, intergovernmental fiscal policy would require compliance with GEAR targets, resulting in a reduction in spending and centralising policy to National Treasury. Redistribution by 1998 was deemed a national (not local) responsibility and proposed the withdrawal of the RSC levy (abolished in 2003). This further limited the role local government could play. The equitable share formula to fund local government through national transfers predicated that only 10% would be needed. The remaining 90% would be self-financed - which immediately meant that local government was underfunded - and although transfers were made to local government in lieu of the RSC levy, they were lower amounts (Professor Thornhill). Finally, the repeal of the Profession of Towns Clerk Act (1996), for reasons of transformation, which till then had required qualified professionals as municipal managers, created an unregulated environment and compromised performance, as politicians took centre stage. This manifested in a failure to recognise professional municipal officers; with lack of professional development and job insecurity leading to high turnover rates, and low barriers to entry (Mashatisho 2014, p.5). This view is shared by Mr M Pomeroy, head of municipal electricity undertakings at the Johannesburg Municipality who resigned in 1996 (joined 1959) citing constant political interference<sup>38</sup>.

<sup>38</sup> Interviewed January 27, 2017. At the meeting Mr Pomeroy stated that this practice continued and most of his colleagues left. His replacement was not sourced from the department but replaced by a senior official who was without a portfolio at the time. This impacted staff morale as deserving and competent employees were overlooked and also resulted in declining performance of the undertaking as the new head was inexperienced

Recognising the damage that the Act was causing, National Treasury reversed it in 2007, but by this time local government was being asked to do more with less, due to its declining skill base. Of seemingly even greater consequence was the loss of skills and structure which had been built up over many decades. In hindsight, perhaps a more orderly transformation process could have been considered.

#### Local Government under Pres. Mbeki's First Term (1999 – 2004)

The second national democratic elections (1999) saw President Mandela step down to be replaced by President Mbeki. Local government elections were held in 2000. Although many stalwarts remained, the new dispensation brought new faces who wanted to make their mark - realising that the honeymoon period after the 1994 elections would not last forever and the black electorate was waiting for its living conditions to improve. The new government identified two priorities to complete the restructuring of local government. The first, was the establishment and induction of the new municipalities, which would be done in three phases. Phase 1 (2000-2002) would see all administrative requirements being finalised. The second phase would allow time for consolidation, and from 2005 on, the focus would be sustainability. The delays were immediate and it became clear that the process was underestimated and would take much longer than expected. The second priority was the completion of new policy, legislation and frameworks. Worth mention because they relate to local government, include: 1) Free Basic Services (FBS): Pre-defined free quantities of water, electricity, sanitation and refuse services targeting the poor. 2) The Municipal Systems Act (2000): Regulated planning, service delivery, performance monitoring and public participation; 3) The Municipal Finance Management Act (2003): Financial management, accounting, supply-chain management, reporting and budgeting; and 4) The Municipal Property Rates (2004): Property evaluations and taxing.

Although programmes and legislation were put in place to manage local government, the fault line between public expectation and local government's ability to deliver, was deepened by national government demands. This is well demonstrated by the FBS Free Basic Electricity (FBE) programme, whereby municipalities would distribute free electricity and receive a compensatory grant from national treasury. The legislation allocated a subsidy of 50kWh for self-targeted households<sup>39</sup>, and required local authorities to keep a register of applicants. Qualifying households must demonstrate that they meet the minimum income threshold and provide evidence that they both own and are full time residents of the household receiving FBE. In practice however, many local authorities do not keep registers, resulting in most houses receiving FBE, regardless of whether they qualify or not (Nzimande 2008b; Bantsijang 2013).

#### Local Government under Pres. Mbeki's Second Term (2004 – 2008)

The second Mbeki term (2004) came with contradictions. On the one hand, the ANC extended its domination across all three spheres of government and took control of the Western Cape and KwaZulu Natal provincial government, now administering all nine provinces (until then it controlled seven), and tightened its grip on the areas it already controlled. On the face of it, and according to the ANC itself, the results represented an overwhelming expression of confidence in the party, and specifically from the poor,

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<sup>39</sup> Self-targeted is defined as: 'Households that are "poor" generally have a low demand for electricity. Their needs could adequately be met by restricting the current drawn from the supply to about 10 Amperes (increased to 20A). These households would consume the FBE at no cost and pay the approved tariff for all units of electricity consumed above the free allocation Chetty (2006, p.37)

(Mbeki n.d.). Notwithstanding, a tactic the ANC had used so effectively during apartheid, now began being applied to them. After a 10-year break, mass protest action (excluding industrial action) resumed.

Recognising that inequality was growing, Mbeki identified local government as a major role player in his corrective strategy. The inter-governmental relations framework (Act 13 of 2005) aimed to improve and promote relations between the three spheres of government, by: 1) Formalising interaction and communication between national departments and local government; 2) Executive mayors being given direct representation in provincial inter-governmental forums; and 3) District and local executives accessing a direct forum to improve their communication and relations.

Within this context, the successful bid to host the 2010 FIFA World Cup also required major infrastructure projects; potentially was what was needed to dent the country's stubbornly high unemployment rate (>20%) by creating new jobs and opportunities. However, national government underestimated local government's ability to deliver what was required, which stemmed primarily from grossly miscalculating the effects that transformation and other issues had had on local government performance. A two-year intervention (2004 – 2006) was devised. Herein, *Project Consolidate* and *Siyenza Manje* were formalised programmes of national and provincial government oversight of local government performance as allowed and required by the constitution, but which until that time had not been exercised. As a result, 1 124 technical experts were sent to 268 municipalities by 2008, to support financial management and infrastructure planning and training (Powell 2012). Regrettably, these efforts amounted to little, as in his 2009/10 assessment, the auditor general stated: *"despite an abundance of technical tools to support municipalities ... the results were only fractionally better than the previous year."* Cabinet then adopted the five-year strategic agenda (5YSA) in 2006, following a review of the first five years. It was found that expectations for transition were too ambitious and the mismatch between national policy objectives and local government's ability to implement them was widening. Three imperatives were identified: First, local government would have to improve performance and accountability. Second, a national capacity building initiative was needed to improve skills, and finally, all three spheres of government required improved policy coordination, monitoring and supervision. Simultaneously, the populace had started losing patience and protest action had gathered momentum.

Commonly referred to as "service delivery" protests because their cause was the perceived lack thereof, and seen as a common revolt against *"uncaring, self-serving, and corrupt leaders of municipalities"*, protests gained notoriety for their remarkable ability to quickly escalate into violence and the destruction of property. Underpinning all the protests: a growing frustration at the injustice of persistent inequality (Nleya 2011; Reddy & Govender 2013; Alexander 2010). The escalatory nature of protests, and the opaque way in which police present statistics, which many believe is done purposefully to mask the true numbers, make it difficult to produce definitive numbers. For a detailed explanation see (Alexander 2010; Newham n.d.). Table 4-6 lists political gatherings recorded by the South African police for the period 2005 to 2008. Not all are related to service delivery protests *per se* and the numbers are questionable. For example, the number of just 4 protests in Mpumalanga during 2008 is undoubtedly dubious, if the previous and preceding years are considered. Figures put out more recently by the Institute of Race Relations, (Table 4-7) also sourced from police records, are notable for the increase in unrest-related (violent) protests. Indeed, both sets of figures point to increasing dissatisfaction with local government, where after a brief reduction during the Zuma ascendancy and election (2007 - 2009) the numbers increase once again, with a greater occurrence in areas with high levels of fruitless and wasteful expenditure

Table 4-6: Gatherings by Province (Violent) (2005 - 2008)

Province	2005	2006	2007	2008	2009	Total
Gauteng	1 932	2 205	1 888	1 451		7 476
Western Cape	557	511	577	642		2 287
KwaZulu Natal	1 891	2 529	1 774	1 146		7 340
Limpopo	660	915	665	642		2 882
Eastern Cape	754	1 383	1 626	733		4 496
North West	1 108	1 341	1 159	1 502		5 110
Free State	506	728	713	483		2 430
Mpumulanga	295	336	337	4		972
Northern Cape	301	489	427	400		1 617
<b>Total</b>	<b>8 004 (10)</b>	<b>10 4337 (35)</b>	<b>9 166 (2)</b>	<b>7 003 (27)</b>	<b>(83)</b>	<b>34 610</b>
Peaceful	7 382	9 577	8 486	6 304		31 749
Unrest-related	622	860	680	699		2 861

Source: Alexander (2010)

Table 4-7: National Gatherings (2011 - 2014)

Province	2011	2012	2013	2014
Peaceful Incidents	11 680	10 744	10 517	11 668
Unrest-related Incidents	971	1 194	1 882	1 907
<b>Total</b>	<b>12 651</b>	<b>11 938</b>	<b>12 399</b>	<b>13 575</b>

Source: Mackay (2015)

The final act of the Mbeki government was to initiate a review of the white paper on local government and to develop a white paper for provincial government. A discussion document to discuss retaining, abolishing or reforming the provincial system was developed, with widespread support for abolishing the two-tier local government system. The process was disrupted when Mbeki lost the ANC leadership in 2007 and resigned in 2008.

#### Local Government under Pres. Zuma's First Term (2009 – 2014)

A first order of business of the new administration in 2009 was a ministerial name change; the Ministry of Provincial and Local Government would henceforth be known as the Ministry of Cooperative Governance and Traditional Affairs (COGTA). All existing programmes were put on hold and the local government turnaround strategy (LGTS) was introduced, based on an assessment of local government that found the system as a whole as “showing signs of distress” comprising of: huge service delivery backlogs, breakdown in council communication with citizens and of accountability to them, political interference, corruption, fraud, bad management, increasing violent service delivery protest, factionalism in parties and depleted municipal capacity. The LGTS required all municipalities to adopt turnaround strategies in the IDPs. As with previous attempts, the LGTS yielded poor results. An interim report by Deloitte (2012, p.4) noted *inter alia* that: “Funding for proposed interventions was limited; With limited capacity to undertake existing functions how could it be possible to turn things around?; Interventions to date were ‘quick fixes’ to achieve compliance and not properly conceived long term solutions; and, Municipalities were suffering

*from transformation fatigue, with cynicism about yet another intervention.* Research conducted by Idasa<sup>40</sup> in 2011, found that as many as 80% of respondents were dissatisfied with the municipal services they received (Reddy & Govender 2013, p.86).

#### Local Government under President Zuma's Second Term (2014 - 2016<sup>41</sup>)

Zuma secured a second term, albeit with a lower majority; and his first move was a cabinet reshuffle, transferring the minister of finance, Pravin Gordhan, to minister of COGTA. In the state of the nation address of 2014 the president reiterated government's commitment to developmental local government, and that despite achievements "*much still needs to be done*". Building on the recently published national development plan, the back to basics (B2B) campaign was then launched. Municipalities were rated: top, middle and bottom; with each category representing roughly one-third of municipalities. The campaign identified characteristics of municipalities in each category and how bottom and middle municipalities could improve and stabilise. The campaign is noteworthy for its simple, direct, approach and its honesty in targeting the middle and bottom tiers. The COGTA minister was moved back to his original post of finance minister in December 2015, in what can only be referred to as a presidential blunder, when the incumbent finance minister (Nene) was replaced for no apparent reason by a junior and unknown member of parliament (D van Rooyen); causing financial free fall that necessitated another cabinet reshuffle just four days later, which put Gordhan back as finance minister, van Rooyen as COGTA minister and left Nene in the wilderness. The status and progress of the B2B is not known in late 2016, but the electorate finally spoke at the 2016 municipal elections: While the ANC retained its overall majority nationally, it lost significant ground to the opposition parties and lost its majority in four (of nine) metropolitan councils: Cape Town was retained by the Democratic Alliance (DA) opposition party; Nelson Mandela Bay, Johannesburg and Tshwane have opposition mayors (DA) under coalition agreements with other parties; and Ekurhuleni is run by the ANC, but under a coalition as it did not secure an outright majority.

*"Angry about corruption, unemployment and shoddy basic services, many ANC supporters have turned to the opposition Democratic Alliance (DA) - making a switch that was unthinkable only a few years ago when the party was still seen as the political home of wealthy whites".*

**Source:** Brock (2016)

An opposition party take-over guarantees nothing though, but closely contested elections do however serve to strengthen democracy and accountability – two primary ingredients of decentralization.

## 4.7 A Historical Institutional Perspective

South Africa opted for a highly centralised governmental system in its first constitution in 1910; becoming more acute over time as the policy of white supremacy was entrenched and formalised through legislation under apartheid – supported by swelling the ranks of the civil service with members of the NP Afrikaner electorate, who were poorly educated and under-skilled. Structural arrangements remained however, and local government was still compelled to comply with ordinances of the presiding provincial

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<sup>40</sup> The Institute for a Democratic Alternative to South Africa, a long standing and highly respected NGO working on democracy and governance shut down in 2013 after 27 years due to a lack of funding. Its reports are no longer available online but regularly cited

<sup>41</sup> President Zuma's second term ends in 2019 but the study limits its research to 2016. He was removed from power by the ANC in February 2018.

administrator. Enjoying little autonomy, with no direct access to national government and being required to be self-funding, further eroded its skill base. Unsurprisingly it was in a perennial state of crisis, which multiple official commissions of inquiry (1960 to 1980) confirmed. National government finally acted in the early 1980s by announcing its policy of decentralisation, in a belated attempt to provide new, and improve existing but inadequate, services to the black population. Decentralisation existed in name only though, as even genuine attempts by national government to reform the system were invariably scuppered by political unrest and the NP's desperate attempts to cling on to apartheid. In truth, the reverse of decentralisation was true. The system became more centralised.

Eventually, a negotiated political settlement with the ANC brought new hope for local government, now elevated by the constitution to a sphere of government – an equal partner with protected functions and revenue sources. An ambitious white paper on local government suggests sincerity of intent, but twenty years on and several large-scale national interventions to address shortcomings later, there is little to suggest that local government has the skills base, autonomy or funding to implement what was mandated by the white paper and envisaged by the RDP. Instead, the effects of affirmative action (necessary, but in practice difficult to achieve, because the required handover faced resistance given its threat to the existing white workforce, and had to deal with the impatience of the new workforce), combined with excessively high numbers of cadre and political appointments (destructive in their focus on political pliability as opposed to the requisite skills), has led to a decline in the availability of skills in local authorities. Taking this one step further, strong parallels can be drawn between this and the purging of local government staff by the NP in the 1950s and 1960s, to replace them with Afrikaners. Indeed, the outcomes are similar – a decline in performance and discontent of rate-payers which almost led to a commission of inquiry. Similarly, continuous nationwide service delivery protests are the order of the day. This comparison, although seemingly valid, has a major proviso: under apartheid these actions were taken to propel a supremacist ideology, whereas in post-apartheid South Africa, it is an overdue and necessary act to create an inclusive and racially representative workforce. A potentially positive outcome may be that in the same way that Afrikaans employees grew into their local government roles and the system shifted more so towards meritocracy, so too will the employees who have been appointed in this young democracy also rise to truly 'inhabit' their roles. An additional and material difference has been the introduction of "wall to wall" municipalities which has delivered poor results – with rural municipalities being barely functional, and the better funded metros struggling simply because they are just too big<sup>42</sup>. Siddle and Thornhill's then both shared the view that the experiment failed, requiring urgent major reform at local government level.

*"It is the neglect of timely repair that makes rebuilding necessary."* Richard Whately

At national level, the ANC abandoned its left-leaning political ideology in favour of neo-liberalism, which did not deliver the economic benefits expected. Inequality and deep poverty persists; but is this because of economic ideology, or much like decentralisation, cannot be implemented selectively?

In applying the neo-institutionalist frameworks for institutional stability and change (Chapter 2) to the historical context outlined in this chapter, long periods of stasis have been punctured by two instances of dramatic change, which occurred in 1948 and 1994. These "punctuations" in themselves should not have been unexpected, as they were the culmination of friction building within the system. The events and

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<sup>42</sup> Based on discussions held during interview

outcomes that transpired are thus now analysed through the historical institutionalist lens – respectively focusing on the three time periods discussed in this chapter.

### Union of South Africa up to 1948

**Period Summary:** The creation of the Union heralded the birth of a new country, whose organizational structure was heavily influenced by its colonial patrons, and to a large extent, masters. The new state adopted the existing British political system, with minor influences from the Dutch as first colonial power and via the governance of the now integrated Boer republics. This was achieved through layering (the introduction of new rules on top or alongside existing ones). Its power structure was fundamentally based on the tenets of white supremacy with centralized governance. The white English-speaking community (British ancestry) and Anglo-Afrikaners (ala Smuts), both of whom were urbanized, controlled government. Afrikaners were marginalized, poor and resentful but enjoyed greater privileges than non-white people. Black people resided almost exclusively in rural areas where local government was almost non-existent. Figure 4-3 shows the structure of the political system during this period with political control (blue) and funding flows (green).

**Objective:** To maintain and entrench the incumbent political system benefitting a ruling elite and moneyed minority; to the economic exclusion of the newly urbanized Afrikaner and (almost total) exclusion of the native population - forced into the economy only as labour.

**Verdict:** Negative feedback loop, where the controlling party sought to maintain new-Union equilibrium; but ultimately challenged by the economically excluded (Afrikaner) white population, resulting in the NP coming to power – first punctuation.



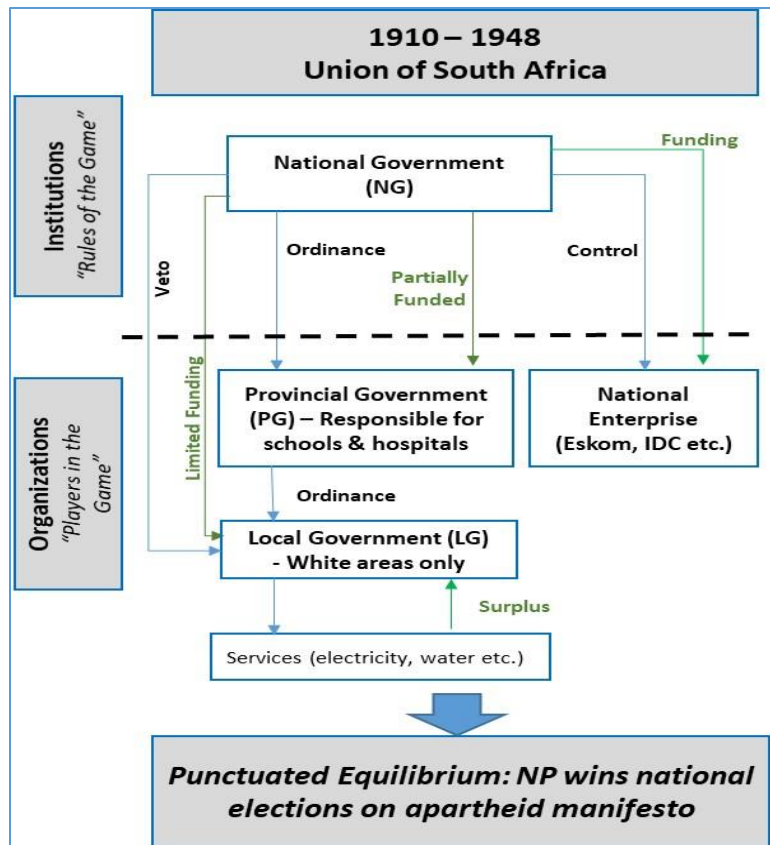


Figure 4-3: Evolution of South Africa's Political System analysed through New Institutional Theory (1910 to 1948)

#### National Party Rule (1948 – 1994)

**Period Summary:** Seen as a clear electoral mandate and emboldened by limited, seemingly surmountable resistance, the first half of NP rule saw the formalization and extension of legislated racism (apartheid). White supremacy was further strengthened and deepened through layering. The tide turned in the 1970s, politically punctuated by the Soweto uprisings of 1976. An obstinate NP however retained control through force - leading to greater political centralization. Attempts to retain supreme power by extending multi-racial rule led to unworkable political concessions in the 1980s, such as the new tricameral system and black local authorities, a duplication of existing WLAs.

Finally conceding apartheid was untenable, the NP entered into open political negotiations prior to the 1994 democratic elections, after a short period of 'quiet diplomacy' with the ANC via a still imprisoned Nelson Mandela – a contingent event. These intense background negotiations, which preceded a point of punctuated equilibrium, satisfy the two requirements (Chapter 2.3.1) of a critical juncture, where: 1) It was possible for different decision to be taken (clearly that option existed, as a large part of the white electorate did not want apartheid to be dismantled); and, 2) Available options were not infinite – which they weren't.

**Objective:** The NP sought to protect white minority rights during negotiations. A primary focus, which was achieved, was greater local government autonomy.

**Verdict:** Positive feedback loop. The 1948 election victory provided an amplifier effect to racist policy frameworks. The process overreached (overheated) as “*demands for change could no longer be contained*” and reversed after a contextually brief period of negotiation – second punctuation. The political structure during this period is shown in Figure 4-4.

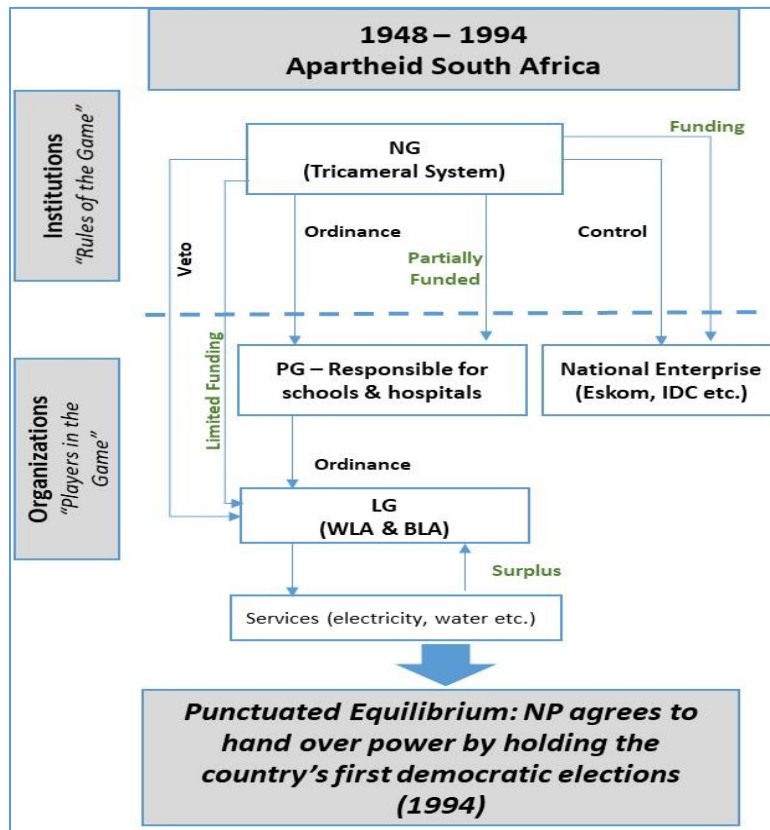


Figure 4-4: Evolution of South Africa’s Political System analysed through New Institutional Theory (1948 to 1994)

#### Democracy (1994 to 2017)

**Period Summary:** The 1996 constitution adopted co-operative government, consisting of three spheres (national, provincial and local). No longer hierarchical, the constitution specified and protected each sphere’s functions, jurisdiction and revenue sources. Based on an urgent need to elevate the lives of those marginalised under apartheid, government prioritised the development of new policies, strategies, economic plans and employment equity frameworks. Existing rules were replaced with new ones (displacement) and local government was tasked with the duty to provide households with basic services (water, electricity, refuse etc.) – illustrated in Figure 4-5. Thus, although the overall structure and form of the local government system was retained, it experienced significant incremental change over a relatively short period of time: WLA’s and BLA’s merged, systems were integrated, boundaries were redrawn and service delivery prioritised – a national government commitment implemented by local government, with two centres of power sharing responsibility. Poor performance would create disjuncture between the two however; consequently bringing government legitimacy into question. Local government then becomes the first line of defence to *knotty problems* (Chapter 3.4.1) - providing national government with an

opportunity to correct. This window of opportunity is not indefinite however, as questions regarding legitimacy soon surface and often escalate.

**Objective:** Developmental government achieving service delivery through local government, employment equity via regulation & economic growth through national economic strategy (RDP, NDP etc.).

**Verdict:** Negative feedback loop – The ANC found itself caught between long-held left leaning ideology and pre-proclaimed economic and social imperatives, a global move toward neo-liberalism (which it ultimately adopted over the former) and the constraints of a negotiated settlement. Once again, the system found, and still finds itself, in a self-maintaining state – acting to counterbalance, not reinforce, changes. And with inequality growing, the political system is building “friction”, which based on observation, is likely to lead to the next punctuated equilibrium.

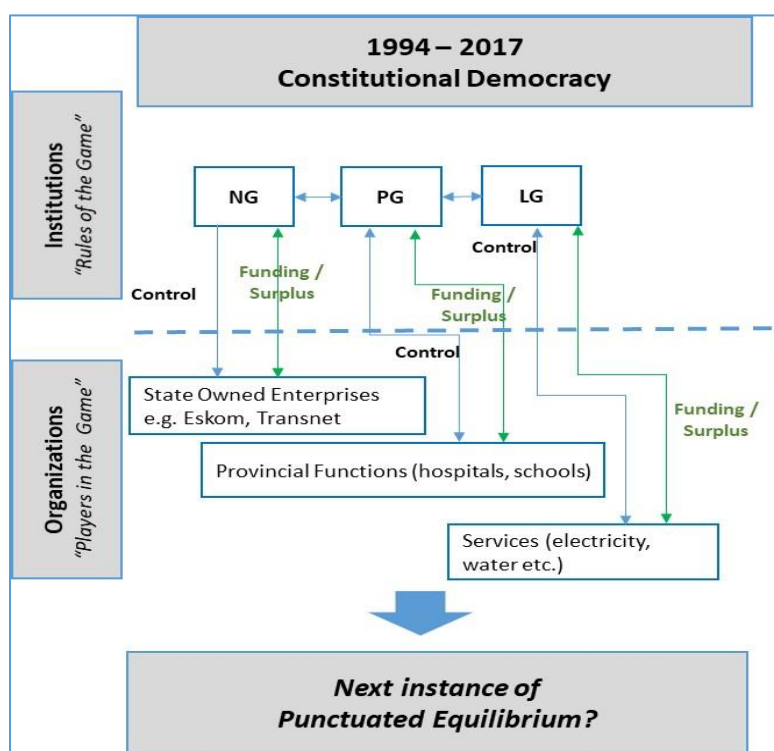


Figure 4-5: Evolution of South Africa's Political System analysed through New Institutional Theory (1994 to 2017)

### Concluding Comment

This chapter tracked the development of the three tiers of government in South Africa, with final focus on the restructuring that took place post 1994 and policies by the new government to reverse centuries of white domination and ingrained local government inequities. Its stated purpose was to provide an overarching context – a sufficiently detailed explanation of the overall political environment impacting on local government, so as to be able to meaningfully bore down to particular issues such as local government finances in the chapters that follow. The next chapter now thus focuses on how local government finances, and the contribution of electricity sales thereto, were structured from 1994.

## 5. Local Government, its Finances and the Role of Electricity

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*"We are, most of us, profoundly uninterested in municipal affairs"*

Maud (1938, p1)

### 5.1 Introduction

Chapter 4 outlined the political development of local government within a broader governmental context - hierarchical and centralised from inception. Municipalities were required to comply with and implement ordinances issued by the provincial administrator, (in turn directed by national government), without dissent or question, regardless of the beliefs and views held by their constituency. The low political standing of municipalities was made more difficult by national government's requirement to be almost entirely self-funding; even with only one primary source of local taxation, the property tax. Financial assistance from the National Treasury was negligible. In 1979 for example, subsidies from central government constituted just 4.7% of income for the City of Cape Town (Solomon 1983, p.58). And although the 1996 Constitution elevated local government and protects municipal revenue sources (Chapter 4.5.2), the principle of self-sufficiency, or self-funding, remains. For reasons to be expounded upon, the financial needs of municipalities have grown since inception of democracy, whereby they are unable to balance their budgets without national grants. From 4.7% in 1979, the City of Cape Town in 2014 required 14.7% (operating and capital budget) (City of Cape Town 2015, p.128). In 2003 the national average had increased to 8% (Bahl, 2003) and in 2015, the Treasury reported it climbing to 25% (National Treasury 2015, p.78).

Indeed, in understanding core tenets of municipal funding relevant to this research, discussions in Chapter 4 are preceded by in Chapter 3, which amongst others reviewed mainstream economic and academic thinking; advocating decentralised local government and financial self-sufficiency, and driven primarily by the collapse of communism in the east and a move to reduce government's participation in the economy in the west (Chapter 3.3). Using these events as the starting point, as it coincides with the dismantling of apartheid, the first part of this chapter then tracks the evolution of South African municipal finances since democracy, to ascertain the following: The extent to which municipalities did, or did not, adopt such thinking (Chapter 3.5); how they have fared; the contribution of user fees to municipal budget; and to identify inconsistencies between the theory and application thereof.

### 5.2 South African Local Government Finance under Democracy

#### 5.2.1 Period 1: 1994 - 2003

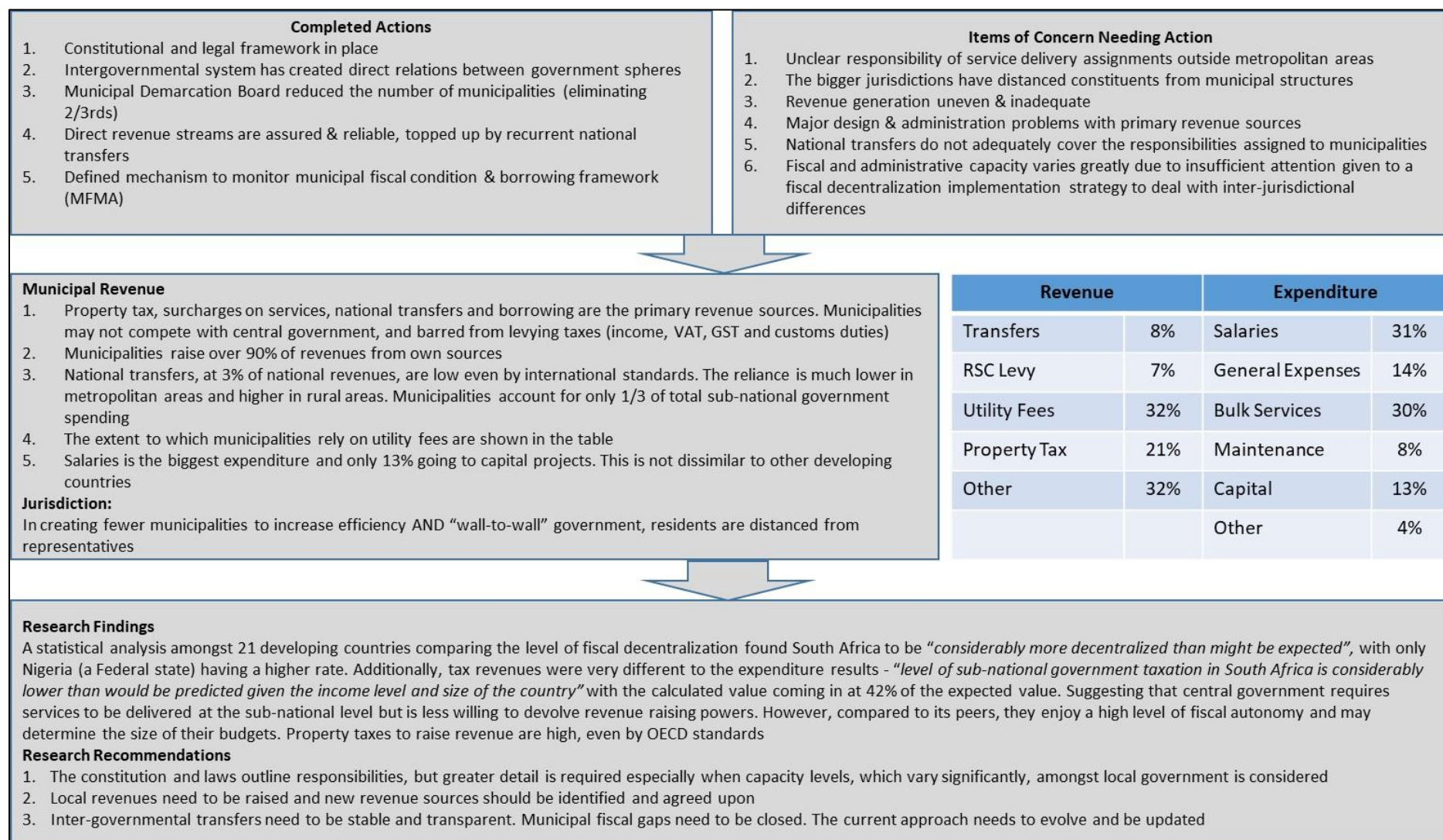
Beyond the euphoria of peaceful transition, even from a local government finance perspective, South Africa's conversion to democracy caught the attention of the world. This was particularly because it came at a moment in history when the new government could be encouraged to adopt fiscal decentralisation, as all developing countries were at the time. In truth though, major South African cities had never relied on centralised support through national transfers; always required to generate their own revenue, albeit only used for the benefit of the white population. Chapter 7 of the constitution, with 14 articles, mandated developmental local government, which now meant undertaking and financing a much wider and inclusive set of responsibilities (Freire & Stren 2001). Independent revenue mechanisms were provided to support

this mandate, while requiring the other two tiers of government to provide tacit support (in theory anyway). Reform for local government had arrived; and global decentralization enthusiasts had a best practise example unfolding, to which they could lend support, refer to at conferences and publicly recommend; which they certainly did. See Bahl & P.J. (2003), Cameron (1996), Cameron (1997), Cameron (1999), Bahl & Smoke (2003).

The first local democratic government elections were only held six years after the 1994 national elections, in 2000. By then, South Africa's initial successes towards fiscal decentralisation<sup>43</sup> were already being lauded- 1) A constitutional and legal framework had been created; 2) Inter-governmental relations which reduced hierarchical arrangements, were in place; 3) The number of municipalities had been reduced by two-thirds by the municipal demarcation board; and 4) Key elements of a local government revenue system were operational. These four achievements were major milestones which most countries were still grappling with and meant that South Africa's progress was being closely monitored by many governments and economists. The process began experiencing challenges however, and to take longer than expected - "*given the complex political, institutional, and fiscal environment that prevails*". A detailed case study led by two internationally renowned academics on the subject was undertaken and published in 2003: *Restructuring Local Government Finance in Developing Countries – Lessons from South Africa* (Bahl & Smoke 2003), to assist both the country and analysts working on fiscal decentralisation in other countries. The study concluded that for South Africa to meet the substantial role given to the local sphere of government, difficult choices would have to be made. The researchers overview is summarised in Figure 5-1.

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<sup>43</sup> As per definition: Revenue from central government and the authority to raise revenue from local sources, is transferred from national to sub-national levels (Chapter 2.3.2).



Source: Bahl (2003)

Figure 5-1: State of Fiscal Decentralisation in South Africa (1994-2003)



When looking at the above assessment within the context of this thesis, the four previously identified revenue sources (property tax, user fees, national transfers and loans) are covered in Chapter 3. Thus, of particular interest now are utility / user charges for electricity and two new potential sources – excise and motor vehicle taxes.

### Utility / User Charges

Municipal reliance on the revenue derived from user charges, especially electricity, is a paramount issue for three reasons: First, is the magnitude of the surpluses that accrue after bulk purchases and other operating costs have been paid, which can then be used to fund other activities. Second is the large cashflow that these sales provide. Indeed, most municipalities' debt ratings would be affected without them. By way of example, gross utility receipts constitute more than a third of total local government receipts, which is greater than property tax collection. [It must be noted however, that this is the case for 25% of municipalities - metropolitan and larger cities. 50% operate at the break-even mark and the remaining quarter operate at a loss. Given South Africa's high urbanization rate however, (Figure 3-2), where the percentage of the urban population has gone from 53% in 1994 to 58% in 2003 and then jumped to 65% by 2016, these metropolitan and large city figures are now beginning to apply more and more to the majority of the population.] Finally, municipalities use electricity supply as a credit control tool, because all municipal charges (property tax, water, electricity, refuse collection) are bundled into one bill. Electricity supply is only reconnected if the entire outstanding debt is paid.

Although a reliable revenue source, user charges violate three primary characteristics of a good local tax {Table 3-3}: 1) User charges are a hidden tax, making them non-transparent. The knock-on effect is that local accountability is compromised, as voters cannot hold officials responsible if they do not know how and where taxes are used; 2) User charges are transportable. Many users do not reside where the electricity is consumed; and users, more especially businesses who contribute most to the surplus, may move their operations or residence to a better priced municipal distributor; and 3) The consumer price of electricity is overstated by the amount of the implicit tax, which varies from municipality to municipality – not only affecting efficiency, but with potential impact on national and domestic commerce.

In 2003, when it was expected that municipal EDI would be regionalised and privatised (Chapter 7.5.4), it meant the possibility of municipalities losing one of their most productive revenue sources; threatening their economic viability. Finding a replacement was thus a priority, and perhaps keeping the status-quo was an even bigger priority.

### Utility Excise Tax

A utility excise tax was seen as a viable replacement for the surpluses that would be lost from the privatisation / regionalisation of municipal distribution systems under the REDs initiative. The major advantage of an *ad valorem* on electricity sales would be the large customer base, making the revenue buoyant, as it would grow with consumption. Rates could also be scheduled to suit the requirements of local government, by offering rebates and incentives. Additional advantages were identified, such as that migrating from an implicit to an explicit tax, meant that the tax can be levied regardless of whether a surplus was generated or which municipal entity distributed the service. Likewise, once accepted, it could be introduced to other municipal services like water distribution and waste collection. In addition, an excise tax would greatly reduce the incidence of tax exporting, as it would be paid to the local authority

which presides over the area, regardless of service provider. It would also be straightforward to administer and collect by being included in the existing bill, requiring minimal additional effort; and finally, it resolves the concerns held by local government on the loss of revenue from restructuring, while complying legally, as the constitution allows for the use of an excise tax.

A major concern of adopting an excise tax however, is that it may be deemed to be regressive and would affect low income households disproportionately. An excise tax, set at a rate to achieve existing surpluses, would have little impact on tariffs, but would now be visible to consumers, making it politically unpopular. Under such conditions, the call for the provision of relief to low income households would be strong.

### Motor Vehicle Taxes

The revenue from the annual renewal of motor vehicle licenses accrues to provincial government, but there is ample justification for municipalities to access this revenue source; and if not outright, to then receive a share of the proceeds. Vehicle taxes display most of the characteristics of a good tax, such as equity and administrative ease, while being both revenue productive and buoyant. Local roads must be maintained and taxes should help offset such costs. Additional options for revenue include congestion charges, parking charges, fuel taxes and tolls. Such measures could help reduce pollution and congestion. - In 2009, metropolitan municipalities started receiving a portion of the national fuel levy to assist with road maintenance (Figure 5-3), as recommended by the authors (Bahl and Smoke).

### 5.2.2 Period 2: 2004 -2015

Although the exercise undertaken by Bahl and Smoke cannot be repeated for the ensuing period (2004 – 2014), it is worth looking at how local finances have developed since 2003. A review of National Treasury's Annual Budget Review<sup>44</sup> (NT) publications for the period 2004 to 2015, shows four underlying trends. The first, is a steady reduction in the percentage of own revenue generated by local government. For example, in the early 1980s, Solomon (1983) calculated national transfers to be in the order of 4% for the City of Cape Town, as a relatively representative figure of the national average. Another study a decade and a half later in 2000 by Bahl (Figure 5-1) found that the national average had doubled to 8% - with transfers being highest for district municipalities, less for municipalities and lowest for metropolitan cities. In the same order, national transfers in 2016 were 80%, 37% and 19%. Figure 5-2 clearly illustrates this trend, where for the period from 2003 to 2016, national transfers have quadrupled and the local government percentage of national budget has increased more than two and half times. Some, not all, were planned such as the decision to terminate the RSC levy on the 1<sup>st</sup> of July 2006. The loss of revenue to municipalities was compensated by increasing national transfers, which in 2006 resulted in the percentage of total national budget transferred to local government increasing from 4.9% to 6.3%<sup>45</sup>, with national government making greater use of non-discretionary funding. The second trend was the realisation and tacit acceptance of sub-optimal performance at local government level. This is evidenced in the tone of the NT commentary, which in the early 2000's - although recognising the challenges of amalgamating municipalities (843 to 284) and being pragmatic about the task of transforming them to meet their service delivery mandate - was positive and ambitious. This gradually transformed to one of concern, and even alarm, about continued poor performance, mismanagement and growing backlogs. In 2004 an additional

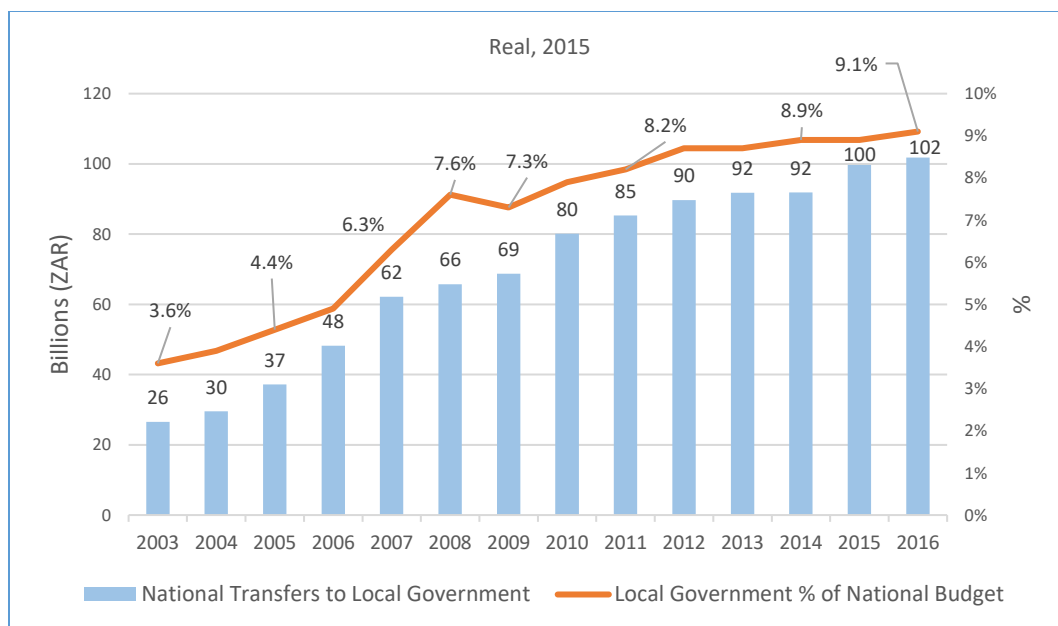
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<sup>44</sup> The reports are published annually and sourced from the National Treasury website [www.treasury.gov.za/documents/national%20budget/](http://www.treasury.gov.za/documents/national%20budget/)

<sup>45</sup> Not to be confused with the percentage of total municipal revenue from national transfers

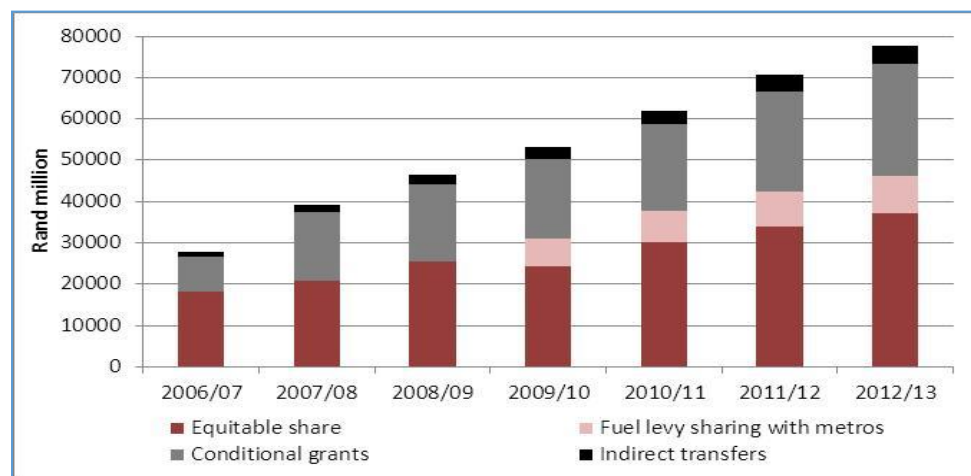


R750 million per annum was made available to municipalities by NT, to prioritise in-house capacity building (Budget Review, 2004.162). In 2007, continued capacity constraints in municipalities saw NT launch the Siyenza Manje project to strengthen engineering and project management expertise. The initial budget allocation was R742 million (Budget Review, 2007.147), which was expanded to include financial management; costing R1.45 billion by 2011 (FFC 2011, p.5). And in 2014 *“While much has been achieved in the rollout of municipal infrastructure.... Significant work needs to be done, both to eradicate backlogs in access to services, and to ensure that services are properly operated and maintained over the long term. ....there has been widespread waste and inefficiency.”* (Budget Review, 2014.101). In 2016, NT then announced a (another) review to determine what could be done to improve performance. These interrelated trends coalesce in the growing exasperation that despite over a decade of annual double digit percentage increases in funding to municipalities, the financial status of local government remained precarious or had worsened – the 2011 Budget Review (page 59) had a section titled *“Vulnerable cash position of municipalities”*. Municipal finances were perhaps more of a concern and less of an issue while the national economy was growing up to 2010, albeit by far less than required; but the sustained pressure of low (<1%) and negative GDP growth since 2010, has meant that national resources have to be carefully managed. Once again, reforms were put in place, but with a greater focus on financial efficiency *“Municipalities can improve billing and revenue, reduce water and electricity losses and enhance maintenance”* and *“Municipal standard chart of accounts, in pilot phase, will promote transparency and accountability”* (Budget Review, 2016.83). The final trend identified, is the growing impact of higher electricity tariff increases on sales from 2007 onwards. Initially this resulted in a windfall for municipalities, as the increases, which came off a low base, took some time for users to respond to. By 2016 however, significantly lower surpluses were generated, amidst a depressed economy and consumers now having taken measures to reduce consumption, *“Recent increases in the costs of bulk electricity and water have reduced the surpluses municipalities generate from these services”* (Budget Review, 2016.92). This issue is dealt with in greater detail in the Johannesburg case study (Chapter 7) – with the primary reasons for smaller surpluses including reduced consumption due to the magnitude and frequency of the tariff increases, and the higher bulk tariffs being charged to municipalities, now impacting expenditure and revenue ratios.



Source: Author derived from National Treasury

Figure 5-2: National Transfers to Local Government (2003 to 2016)



Source: Moore (2012)

Figure 5-3: Breakdown of National Transfers to Local Government (2007 – 2013)

In recognising the financial and skill deficiencies of municipalities, central government has taken various measures. Amongst others, it: Revised the equitable grant formula to favour smaller and district municipalities, to compensate for the more limited revenue raising opportunities now available to them; allocated a portion of the national fuel levy to metropolitan cities to fund road maintenance; expanded conditional grants for infrastructure projects (electrification, water, transport, urban settlements, rural roads) to ensure service delivery projects are prioritised. Indeed, conditional grants in 2016, as a percentage of total transfers from national government, had increased to over 80%. NT then went one

step further and introduced indirect transfers<sup>46</sup>; while after a long battle, municipalities succeeded in preserving one of their two primary revenue sources (electricity surpluses) when REDs was withdrawn. Metropolitan electricity networks were strengthened by national government as part of the World Cup 2010 project, which in the view of Dr de Beer postponed the crisis facing the municipal EDI (Chapter 7.5.4 RED's (So Close, Yet so Far), ISMO and ADAM (Much of the Same).

Despite these developments, by 2016 local government had not achieved the fiscal decentralisation objectives identified in the empirical research, and if anything, the reverse is occurring. Indeed, additional and new own revenue sources have yet not been identified and introduced, while annual shortfalls are “plugged” by electricity surplus and national transfers, (which the treasury has had to increase every year – even more so since surpluses decreases due to reduced consumption). And while municipal performance has been a major cause of concern for national government since 2000, with several strategies implemented to try and address the issue, success has been limited at best. For example, in the Attorney General's June 2016 media release on local government audits, it was reported that municipalities had improved over the last five years, with 54 receiving clean audits, compared to just 13 for the previous period. If one considers however, that there are 278 municipalities, then 54 of 278 demonstrates just how poor the overall performance is. Of greater concern was the finding that: *“In 2014-15 the AGSA rated the financial health of 92% of the municipalities as either concerning or requiring intervention (82% in 2012-13)”*. This was made apparent by: Net deficits, with current liabilities exceeding current deficits; an inability (or taking too long) to collect revenue; and not paying creditors on time (AGSA). On this evidence, the issues of inadequate skills and financial resources faced by local government since formation of the Union, continue in the 21<sup>st</sup> Century. Despite constitutional mandates attempting to elevate and reform local government, and sincere, concerted, efforts to manifest this, it has not occurred, as indirectly predicted by Bird (2011) in his paper, *Subnational Taxation in Developing Countries*:

*“The “best” package for any particular country of subnational government is likely to be not only context specific and path-dependant, but also highly sensitive to the balance struck between different political and economic factors and interests.”*

In 2016 the tenuous nature of revenue from municipal services was publicly raised by the then Johannesburg mayor Parks Tau, when he called for an official review of local funding sources. Even as SALGA President, and joined by other local government leaders, Tau continually raises the issue. At the heart of the municipal finance review argument is local government's developmental mandate, which must overcome the spatial segregation legacy of apartheid and the high urbanization rate of indigent people, in the form of *“land invasions, mushrooming of informal settlements and proliferation of backyard dwellings.”* Here, the unavoidable consequence is revenue earmarked for infrastructure development being redirected. Additionally, the expectation of extracting meaningful revenue for services provided to unemployed and low income earners, is unrealistic. Indeed, even those who do pay, consume less than the costs incurred to service them. Thus, the 9% of overall national revenue which is transferred to local government (Figure 5-2) is insufficient, and SALGA has called for legislative changes – particularly singling out, *“changing NERSA's and ESKOM's unfettered rights to impact on municipal infrastructure and finance management”* (SALGA 2017; Tau 2017; Naki 2016).

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<sup>46</sup> Under this approach, a national department undertakes a function on behalf of the municipality (or province). No funds are transferred and on completion the infrastructure is ceded to sub-national government who then holds operational and maintenance responsibility. Such projects grew from R3 billion in 2010 to over R10 billion in 2016 (Treasury 2016a; AGSA)

Municipal finances also featured prominently at the 2017 Chartered Institute of Government Finance, Audit and Risk Officers (CIGFARO) conference. Here, in a top down explanation, the Financial and Fiscal Commission (Mabugu 2017) noted the impact of the protracted economic slowdown on public finances (income down by R352 billion for the period 2009 to 2016, of which R24 billion would have accrued to local government), putting pressure on all government expenditure. Regardless, structural changes were deemed necessary to maximise revenue generation. Five were listed:

1. Reform existing tax instruments: Such as increasing or broaden VAT rate;
2. Introduce new taxes: Carbon tax, local business tax and land value capture;
3. Enhance tax administration and close loopholes: Address base erosion and profit shifting;
4. Efficiency: Reduce public sector wage bill, improve municipal efficiencies (reduce electricity and water losses, resolve debt issues) and improve inter-governmental coordination; and
5. Combinations of the above.

The CIGFARO president stated that the association would not support the implementation of any new taxes unless the current fiscal mechanisms had been maximised.

National Treasury's (Fanoe 2017) presentation then focused on the Division of Revenue Act and explained it was specifically designed to benefit smaller rural municipalities without revenue raising abilities of metros – and thus receive twice the allocation per household compared to what is transferred to metros. The speaker noted the popularly quoted perceived factors contributing to municipal failures, such as underfunding, unviable municipalities, governance failures, the design of the inter-governmental system or national government itself – all anecdotal in her view. The facts on the other hand, it seems mirror the sentiments expressed in the interview with Siddle and Thornhill (Chapter 4.7) as well as the Auditor General's findings, and were that municipalities collectively underspend each year, with their share of total national revenue actually being substantial at 24% (9% transfers plus own revenue sources); and that ultimately it is mismanagement, lack of internal controls, leadership challenges, and massive water and electricity losses which need immediate remedial action.

### 5.2.3 Municipal Finance Practise compared to Municipal Finance Theory

As already outlined, theoretical understanding around municipal funding frameworks recognised that municipalities with limited revenue sources were left with little choice but to rely heavily on user charges – making them particularly attractive because these sources are not accessible to the other tiers of government, making interference unlikely. This practise, theorists noted, allows for accountability, as residents can vote new political parties into power, if dissatisfied with service levels. There are however two disadvantages: The first, especially when revenue is constrained, is the strong tendency to maximise surpluses for general purpose use – at the expense of the service itself, with maintenance and new capital investments as typical first casualties. In effect, the user charge practice provides a subsidy from those who use the service to those who do not; a crude redistributive technique often missing the target group entirely. Secondly, tariff structures which are not carefully considered can have material consequences: Here, for example, quantity / volume discounts place the burden on low users and are thus regressive. Marginal pricing is also problematic, because it is difficult to define costs properly and it may still be difficult to determine the appropriate charge even if costs are defined correctly. For example, electricity tariffs which are deemed too high by users, will result in reduced consumption, and for those who can afford it, a switch to distributed generation or energy efficient technology. This puts the entire municipal

funding model under pressure; all of which now occurs in a strained economic environment that only serves to further compound the effects (Solomon 1983; Mawhood 1993; Reynolds 2004; van Ryneveld 1990; Sioshansi 2014). Here thus, it seems evident that the theoretical projections were accurate, as these outcomes have materialised.

The second, and more important issue however, is a problematic dichotomy in objectives. Theory states that the municipal priority should be efficiency, with broader developmental goals left to national government. And therein lies the rub for local government in South Africa. The Constitution and White Paper on Local Government (see

Table 4-4) calls for developmental local government to address past inequities and apply a holistic approach to achieve other policy objectives, such as job creation<sup>47</sup>. Yet sustainable financial practise, efficient usage of resources, transparent tariffs etc. are equally promoted. This contradiction places local government in an untenable financial situation, as the political imperative of development is always likely to take precedence over sound financial management – thus confirming the concerns and scepticism that met the local government white paper when it was issued – as detailed Chapter 4.6.

In many ways, the long-standing municipal practise of cross-subsidisation funded from user fees, which served WLA authorities ably for decades, was seized upon after 1994 to fund the extension of municipal services to previously excluded and marginalised residents. Simultaneously, ineffective and inefficient local government has increased overall municipal funding requirements. This means that proceeds from what is seemingly an inexhaustible source of revenue (which it is not) increase disproportionately annually. Ultimately thus, the amplification of this trend points to a positive feedback loop; the expected consequences of which are listed above, with the actual impact analysed in the Johannesburg case study (Chapter 7).

## 5.5 Conclusion

The purpose of this chapter was to extend the discussions around municipal funding and functions in earlier chapters, now into South Africa post-1994, as to allow for an informed discussion of the role of electricity in the next chapter, and a comparison against, the case study of Johannesburg. Indeed, the post-94 period is particularly pertinent for South African local government, because it is one that is affected both by the challenges of the past and of the future - local government now elevated to full tier of government, with a new developmental mandate to address past inequities but still hampered by the timeless challenges of limited income-raising streams - which speaks directly to the Johannesburg case study.

Thus, with much of the focus of this chapter falling on gaining an international perspective, it is interesting to note as a good starting point for this conclusion, that a survey of international literature on local government functions and finance in developed and developing countries, found that even though these are more likely to be weakly constituted and under-resourced in the latter, they are necessary in both. And while the allocation and implementation of local government functions does vary from country to

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<sup>47</sup> It is common practise for political parties contesting municipal elections to make job creation a campaign pledge. For example: Our manifesto recognises that jobs are created by small businesses and not by government ([www.enca.com/south-africa/damanifesto-promises-recipe-sa-success](http://www.enca.com/south-africa/damanifesto-promises-recipe-sa-success)); and JMPD's recruitment of 1 500 officers, 'creating jobs while curbing crime' ([www.iol.co.za/news/crime-courts/jmpds-recruitment-of-1-500-officers-creating-jobs-while-curbing-crime-8874680](http://www.iol.co.za/news/crime-courts/jmpds-recruitment-of-1-500-officers-creating-jobs-while-curbing-crime-8874680))

country, they invariably face similar challenges. Most notable of these is that they ultimately have to yield to central government decisions (funding cuts, policy changes etc.) and have limited revenue raising instruments available to them, as they are generally barred from using national tax instruments to raise revenue. Property tax is by and large the only tax they can claim as their own, which although reliable, tends to be inequitable due to its bluntness. The research has shown that there are sound economic reasons for avoiding tax duplication between tiers of government, but the effect on local government finances has been to place them in a precarious position, as national transfers undoubtedly compromise autonomy and are of the first expenditure items to be cut during periods of national belt tightening. Thus, it is not unsurprising that local government, which is expected to provide public benefit services for which it cannot recoup costs (libraries, public parks, recreation centres), will seize upon revenue generating opportunities where they present themselves, as has been the case with electricity - and it is that which will now be further explored through the prism of historical institutionalism, with the focus on South Africa as context, in later chapters. We begin with an in-depth analysis of the economic history and the role of electricity in the chapter that follows.

## 6. Economic History and the Role of Electricity

*“Economies rarely get rich on agriculture alone”*

Allan Beattie, 2009

### 6.1 Objectives and Structure of the Chapter

At its core, the research seeks to determine whether the challenges faced by municipal EDI can only be fully understood within the context of how it evolved in tandem with, and continues to be influenced by, two factors: 1) Government structures (national and provincial); and 2) The national ESI and its role and contribution to the development of the economy, of which municipalities form only a part. And while it is of course true that the ESI of every country is the lifeblood of its economy, for South Africa this is perhaps even more so. Here the state’s entire economic development and industrialisation strategy was largely premised on cheap and plentiful energy, especially low-cost electricity, in providing a competitive advantage. Indeed, the crucial extent to which the system was dependant on cheap abundant electricity, has ultimately had costs borne by the entire economy (Mohammed 1997). In providing context, Chapter 4 reviewed the evolution of government; Chapter 5 considered municipal functions and the funding thereof; and this chapter explores the broader political economy of South Africa from an electricity perspective. These chapters (3, 4 and 5) highlight the inter-related nature of ESI to its context and demonstrate that it cannot be viewed in isolation – thus providing the conceptual foundation for detailed analysis of the South African municipal ESI in the following chapter.

This chapter commences with an international example, which provides a basis for analysis. It compares and evaluates the fortunes of two nations sharing similar conditions at independence two centuries ago, but ultimately had very different economic outcomes. The focus is then brought back to South Africa and the research presented in the now familiar time periods. The approach used to present the historical research for each time period, in the inter-related spirit of this work, is done in two parallel streams. The first articulates the economic development of the country, and the second traces the national ESI. The analysis provides a first-hand example of the complexities associated with neo-institutionalism, approached through historical institutionalism.

As the development of the national electricity generation, transmission and distribution system and its role in the political development of the country has been adequately recorded, see (Marquard 2006; Christie 1984; Conradie & Messerschmidt 2000; Fine & Rustonjee 1996; Steyn 2001), the research that follows relies substantially on this existing secondary research for context, but augments it in two ways: Firstly, the narrative is relayed from a MEU’s perspective, which to date has not attracted much attention from academic researchers and historians – providing key perspective from a hitherto underrepresented sector in the South African ESI. Secondly, the existing research is complemented with primary research findings. The research also considers and evaluates change from a historical institutionalism perspective, thereby adding a new layer to existing literature.

## 6.2 Introduction

A historical comparison of the development of the American and Argentine economies (Beattie 2009) to determine why two countries with similar economic potential and prospects when becoming independent in 1789 and 1816 respectively, has led to America being a global superpower, while Argentina keeps moving from one financial crisis to the next; concluded that it was down to choices made. Both nations had large tracts of land occupied by a small number of resistive native people, ultimately defeated by superior firepower. With the land secured, both nations focused on building an agrarian economy. Natural resources, abundant in both countries, could only be exploited in the next stage of development, while labour shortages were resolved by migrants from Europe. But that is where the similarities ended, as their choices took them on very different paths. Argentina handed out large pieces of land, creating a small elite of exceedingly wealthy landowners who exported their produce. By 1882, the first freezing plant was built in Buenos Aires for the shipment of meat to England (Maddison 2007, p.102) and by 1914 Argentina had an annual growth rate of 6%. In fact, over a 43-year period it posted the fastest growth in the world, making it amongst the ten richest - behind the US, Britain and Australia but ahead of Germany, France and Italy. European immigrants streamed into the country and by 1914 more than half of Buenos Aires's population was foreign born. The economy was built, almost exclusively, on exportation of meat and grains to Britain. A combination of factors - the outbreak of the First World War; Britain's decision to sign preferential trade agreements with commonwealth countries; the vested interests of its landowners; the flight of capital; an uneducated and unskilled population; and a failure to modernise - led to economic decline (Economist 2015). President Peron, during his first two terms in office (1946 – 1952), tried to reform the country under his programme of economic independence, but the results were mixed at best. For example, the inadequate electricity grid was expanded by only 25% but hydroelectric power generation leapt from 45 to 350 MW. Economic instability led to military dictatorships (five since 1930) and ineffective governments; while Argentina's 2001 \$100 billion sovereign debt default is the world's largest.

Conversely, America handed out small parcels of land to families, who undertook intensive farming and invested capital surpluses to increase productivity, leading to exports and foreign currency inflows. The ensuing economic growth attracted skilled workers from Europe. The US government used the economic surpluses, and foreign capital investment, to substitute labour for capital and is so doing migrate from an agrarian to a manufacturing and then a service economy (Beattie 2009; Baldwin 1956). As with Argentina, the US also faced problems. There was the civil war (1861 – 1865); the decision to break up exploitive monopolies, created in the 1880 and 1890s, through legislation; the stock market crash of 1929 followed by the Great Depression; and the cost of participating in the Second World War; but it nonetheless emerged from these as the new global superpower. Beattie concludes that ultimately the difference between the two came down to selections made and America's ability to adapt to new circumstances. New Zealand, Australia and Canada are additional examples of countries which have succeeded because of prudent decision-making.

Economists broadly agree that a country's ability to create or attract capital for local investment is what ultimately leads to economic development. Conversely, countries which do not, or choose not to, as illustrated in the Argentinean example, find themselves in a vicious cycle of poverty. And although each country will follow a different road to industrialisation, it is possible to make certain generalizations (Trapido 1971, p.50). In South Africa, the discovery of gold, diamonds and other metals from 1870,



catapulted it from a poor backwater to a sought-after destination for entrepreneurs and skilled migrants. Initially, industrialisation led to high growth rates which peaked in the 1950s and 1960s, but then the country's economic fortunes began to unravel. South Africa's economy has been intensely scrutinized by academics over the decades, both locally and internationally, with the focus of the debate being the relationship between apartheid and capitalism. In an ideologically polarised world of east versus west during the Cold War era, academic analysis and comment followed suit. South Africa's segregationist policies which had a direct, if not overwhelming, influence on the economy, meant that an area which ordinarily would have been dominated by economists was ultimately shared with political writers. The former were represented by political economists (liberals) and the latter by radical writers in the structuralist Marxist tradition (Nattrass 1991, pp.654–656) and henceforth referred to as revisionists. The "liberal-radical" debate, as it came to be known, resulted in little direct engagement. Nattrass attributed this to revisionists often being alienated by terminology and methodology used. In response, economists regarded history and sociology as unscientific and held contempt for Marxist analysis. This led to intense discourse, on theoretical and ideological grounds, on how apartheid could be removed, but at the expense of empirical research. Nattrass concedes though that this was not the sole reason, and that additional non-related factors contributed to the lack of engagement. Nonetheless, two separate accounts of South Africa's industrialisation developed and existed until the mid-1980s, which when views softened, allowed for greater cooperation between the two camps (Nattrass 1991; Verhoef 1998; Saunders 1988).

The core issue in the 'liberal-radical' debate was thus: Revisionists contended that capital accumulation, which facilitated the growth of the South African economy to the extent that it did, was a direct consequence of state policy, namely the supply of cheap labour and other protectionist policies, and that there were *"no important contradictions between political developments and the requirements of capital accumulation"* (Nattrass 1991, p.655). The liberal economists' view was that capitalists immediately recognised the long-term damage of the government's segregationist policies, but had little choice but to operate under the prevailing conditions. And while conceding that the system created short run profits for some, it was clear it distorted and impacted negatively on capitalistic development. By their account, capitalists were not implicit in the apartheid system.

## 6.3 Economic Development up to 1910: How the Discovery of Minerals Changed Everything

### 6.3.1 Economic Development: Setting the Scene

Feinstein (2005, p.1) attributes South Africa's economic development to the *"unique endowment of human and natural resources..... Other countries possessed one or two of the distinguishing features, but only in South Africa were all of them present together."* The first was the presence of a large indigenous population, estimated at over 1 500 000 at the beginning of the nineteenth century. The second, was a significant number of European settlers from the outset. In 1820 there were 30 000 settlers, predominantly based in the Cape Province. By 1865 there were 250 000 settlers spread across all four provinces (Cape, Natal, Orange Free State and Transvaal), with the number growing to over 1 100 000 at the start of the twentieth century and reaching 1 300 000 by 1913 (Maddison 2007, p.579). Such large European settlement in territories which had a large indigenous population was not the norm and was not experienced in India, most of Asia and the rest of Africa. From the outset, settlers and the indigenous population were divided, which had major and enduring implications for the group who ultimately

controlled water, natural resources and land. The third, and final, feature was the variety and quantity of natural resources (gold in particular), but this was not known of until their discovery much later. There were other countries, most notably in South America, which had large indigenous populations and minerals, but not to the extent found in South Africa.

Until the discovery of minerals, South Africa was a backward country with minimal economic prospects (Feinstein 2005, p.2) (Lumby & Coleman 1983, p.100) (Nattrass 1981, p.23). The economy relied almost exclusively on agriculture, but the land offered difficult agrarian opportunities: low grade soil; insufficient and irregular rainfall; disease; pests and wild animals; and land disputes with the indigenous population. The discovery of diamonds and gold towards the end of the nineteenth century was the catalyst which combined these three features and shaped the development and structure of the South African economy. By being able to convince foreign nationals to invest part of the capital surpluses locally, South Africa developed secondary industries and did not get trapped in a cycle of extraction benefiting only a few 'Randlords' who controlled the diamond and gold mining industries (Nattrass 1981, pp.162–163), as was the case with elite landowners in the Argentinean experience. The discovery of minerals completely transformed South Africa; and for well over 100 years - although waning in influence in the 21<sup>st</sup> century - minerals have dominated the economy, influenced government policy and allowed for the transformation from a solely agrarian to an industrialised economy.

Table 6-1 compares South Africa against three African countries, as a means of demonstrating how economic power on the continent shifted to South Africa after the discovery of minerals.

Table 6-1: Railway, Population and GDP of selected African countries (1820-1913)

Country	1820	1870	1913
<b>Length of railway line in service (km / million population)</b>			
South Africa	N/A	0	2 300
Egypt	N/A	168	359
Ghana	N/A	0	165
Morocco	N/A	0	84
<b>Population (000)</b>			
South Africa	1 550	2 547	12 144
Egypt	4 194	7 049	12 043
Ghana	1 374	1 500	5 111
Morocco	2 689	3 776	1 870
African Total	74 236	90 466	124 697
<b>GDP (million 1990 \$)</b>			
South Africa	643	2 185	9 857
Egypt	1 992	4 573	10 950
Ghana	570	693	1 595
Morocco	1 156	2 126	3 630
African Total	31 161	45 234	79 486
<b>Per Capita GDP (1990 \$)</b>			
South Africa	415	858	1 602
Egypt	475	649	902
Ghana	415	462	781
Morocco	430	563	710
African Average	420	500	637

*Source: Maddison (2007)*

## Agriculture to Mining: Benefitting from Cheap Labour

Having been dispossessed of their land, the indigenous population was no longer able to farm independently; allowing white settlers to control the labour supply, which they duly exploited. African farm workers were little more than slaves. The white farmers did minimal work and effectively became plantation owners, not doing much more than “*ride about the country*” (Feinstein, 2005 p. 50, quoting the Natal Native Affairs Commission). From 1850 agricultural prospects improved, and so too the need for additional labour, as demand for wool and other products grew in the Cape and abroad. The British colony of Natal started importing labourers from India to work on the sugar plantations, as the farmers were able to convince the governor that they could not find adequate local labour. Over 150 000 indentured Indians came to South Africa between 1860 and 1911, before the practise was stopped by India. The supply of labour reached a crisis point when diamonds were discovered in the 1870’s and gold in the 1880s. Labour shortages continued as Africans were unwilling to work for what was being offered or to succumb to the settlers. Labour contracts were entered into with neighbouring countries and as early as 1898, 60% of the workforce was from Mozambique (Nattrass 1981, p.137). Government and employers responded to the labour shortages by introducing three mechanisms to induce the African population to work. The situation was summarised succinctly by the Holloway Commission:

*“In the past, difficulty was experienced in obtaining a sufficient supply of labour for the industries of the country. The native in a tribal reserve ... felt no urge to go out to labour. Not accustomed to anything more than his simple wants of tribal life he had really no incentive to work for more. The European Governments, wanting labour for their industries, decided to bring pressure to bear on the Native to force him to come out to work, and did this by imposing taxation”*

*Native Economic Commission (quoted in Feinstein. P 55)*

The first instrument was a hut tax, levied irrespective of income. Second was the enforcement of pass laws. These were used to restrict movement and to bind labourers to employers, which ensured their “loyalty” and stopped them from pursuing more lucrative opportunities. The third tool, was the continuous reduction in available agricultural land for Africans (Feinstein 2005, pp.47–59).

By 1911, mines were competing strongly for agricultural labour, with over 260 000 Africans employed by mines compared to 360 000 who worked on white owned farms. Three practises, which developed in the diamond fields, were transferred and entrenched in the gold mines: 1) Skilled labour was for the exclusive preserve of highly paid white employees and manual work was done by lowly paid African employees; 2) African staff were recruited as short-term migrants; and 3) They were housed in closed compounds (Feinstein 2005, p.63). In 1915 the per capita income of whites was 11 times higher than Africans (Holborn 2013, p.10) (Bhorat 2001, p.2) (Feinstein 2005, p.13) (Nattrass 1981, p.139).

The economic benefits from the discovery of diamonds were revolutionary – capital requirements were limited, the mining equipment unsophisticated, labour was performed by Africans for minimal wages, and the profits were mammoth. These factors allowed the diamond industry to develop through the reinvestment of surpluses and by 1938 foreign investment was calculated at less than £20 million<sup>48</sup> (Lumby & Coleman 1983, p.171). The individual diamond claims were consolidated into a few small companies, most notably De Beers Consolidated Mines under Cecil John Rhodes, who by 1879 controlled

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<sup>48</sup> The South African Rand was introduced on February 14, 1961, replacing Round Sterling as legal tender, at two Rand = 1 Pound 10 shillings

the world's supply of diamonds. The gold reefs discovered in the Transvaal (1884) were unlike any others in the world that were easily accessible alluvial or veins of metal ore. The Transvaal reefs had an unprecedented uniformity and continuity in their length and breadth, but they were not easily accessible or to be found in rich veins. Massive areas containing minute quantities of gold were embedded in hard rock quartz, extending at an angle from the surface to depths of a few thousand meters. Extracting the gold necessitated substantial quantities of labour. The difficulty and high cost of mining gold in the Transvaal meant that the industry's formation was very different to that of diamonds. Owners of small claims soon realised that they were not able mine viably and before 1900 the industry consolidated into nine gold mining houses which controlled the Witwatersrand basin. A notable feature was that most of the gold being mined was not being used for industrial or commercial purposes, but to back international currencies. The gold price was fixed at US\$20.67 per ounce from 1834 until 1934. Gold producers could not drive up the price, as was done with diamonds, and thus there was no need to compete or enter into monopolistic practises to influence the price. The only way mines could increase profitability, was to manage costs, of which labour was the biggest (Ross 2008, p.72) (Feinstein 2005, pp.93–95) (Trapido 1971, p.55). Here, the discovery of substantial coal deposits in Boksburg (Witwatersrand) in 1887 was also of major significance for the successful exploitation of gold, as it lowered transport costs (Lumby & Coleman 1983, pp.176–177).

The economic impact of mineral resources can be seen in the country's exports, which went from £2 500 000 a year to over £44 000 000 in less than 50 years. Table 6-2 illustrates how mining kick-started the rest of the economy by creating new markets. Of course, the export figures do not reflect domestic consumption, but do suggest that increased demand from the mines created economies of scale for the previously struggling agricultural sector. The increased production exceeded local demand, which was then exported.

Table 6-2: Annual average exports in £ million (1850 -1909)

Year	Agricultural & Other	Diamonds	Gold	Total	Gold (% of total)
1860-64	2.32	-	-	2.32	-
1865-69	2.62	0.01	-	2.63	-
1870-74	4.22	1.03	-	5.24	-
1875-79	4.36	1.90	0.04	6.30	0.6
1880-84	5.13	3.42	0.02	8.57	0.2
1885-89	3.69	3.72	0.3	8.71	3.5
1890-94	4.98	3.82	4.15	12.94	32.1
1895-99	6.2	4.52	11.29	22.01	51.3
1900-04	7.02	5.14	7.00	19.16	36.5
1905-09	10.29	7.23	27.30	44.82	60.9

*Source: South Africa Year Book, 5 1922 page 692-3*

## The "Poor White" Problem

The state and business controlled African labour as a highly cost-efficient labour source, but were however unsure of how to deal with the large number of destitute and uneducated Afrikaans people who first started coming off the land from 1900 until the Second World War. Partible inheritances and a deep suspicion of urban life, alien to the Afrikaner, had kept them on the land for many generations. But constant divisions and subdivisions of farms, and the massive destruction of farmland during the Anglo-

Boer War (1899 – 1902), resulted in the land not being able to support families – forcing them into the towns, where English speaking whites controlled skilled labour and Africans dominated unskilled labour. Afrikaners were unemployable and unable to live amongst their fellow whites, but also unwilling to compete with Africans for manual labour. The mining industry was also unwilling to employ Afrikaners as unskilled labourers, as they would not be able to pay them what the Africans were earning and could not justify pay differences between the two for the same work. Such a situation would either lead to massive pay increases or unrest, both of which business would best avoid. Bottomley (1993) estimated that by 1924 one in four Afrikaners had become “poor-white” and this increased to one in two a decade later. The “poor-white” problem would thus dominate church and state attention for the next 50 years as programmes and legislation, detailed in the previous chapters, were introduced. The labour division up until democracy in 1994, which was oft explained as skilled whites and poorly or unskilled Africans, was indeed not based on race 100 years previously. Unskilled labour consisted of both races and evolved to the present situation. (Nattrass 1981, 57–58) (Bottomley 1993, pp.1–2) (Lumby & Coleman 1983, pp.23–24) (Feinstein 2005, pp.83–85) (Clark 1994, pp.42–50). An early example of this was the South African mine workers’ union, formed in 1892 and revived in 1902 after the South African War. Open only to white workers, its focus was the maintenance of wages at the highest possible level.

*“In the peculiar circumstances of the South African mining industry, the protection of wages was seen as a constant struggle to prevent the mine owners from subverting the privileged position of the white miner through the advancement of unorganised black labour.”*

(Lumby & Coleman 1983, p.24)

### 6.3.2 Supplying the Gold Mines with Electricity

The development of the ESI took a somewhat unique but understandable path in South Africa. As the mines needed large and concentrated quantities of power, large generation focused on satisfying this demand and paid little attention to residents, especially in towns and cities where there was no mining activity and subsequently fewer financial resources and private capital interest (Cape Town, Bloemfontein, Durban and even Pretoria). Local authorities, whose major functions were the provision of trading and other services such as electricity, water, gas supply and roads, effectively came to own and operate regional utility companies. Siemens and Halske won the first concession to build a commercial power station to supply Johannesburg and Pretoria in 1894, ceded to the Rand Central Electric Works Company a year later. Rand Central’s interest though was in supplying the mines, and building operations only commenced when they received the permission needed to sell to the mines. First power was generated in 1897. The practise of mines building their own power stations continued for the next two decades (Eberhard, 2007:3). In 1906, the Victoria Falls Power Company (VFPC) was formed with the original intention of supplying Transvaal and Rhodesia with hydro-electric power, but the urgency for power after the Anglo-Boer war, delayed the project. In the interim it was decided to supply the Witwatersrand from steam plants using local coal. Ultimately it was accepted that the Victoria Falls *“during the dry season could only produce one tenth of the minimum energy produced by Niagara Falls. In addition, the transmission-line energy-losses on the 1 100 km route to the Rand would be far too high”* (Christie, 1984:30). VFPC purchased Rand Central Electric Works and the General Electric Power Company in 1907 and by 1915 had four thermal power plants with an installed capacity of more than 160 MW (Eskom 2009). The rapid growth and success of the VFPC to supply power to the mines, changing its name to VFTPC in 1909 (Victoria Falls and Transvaal Power Company), was creating a single supplier, which did

not go unnoticed by business and national government who observed that it “*might perpetuate a powerful monopoly*” (Conradie and Messerschmidt, 2000:44). This threatened the interests of several important groups in the Transvaal (Christie 1984:38) and led to the appointment of a Power Companies Commission in 1909. Marquard (2006: 144) summarises the Commission’s findings as: 1) Conceding that there are significant economic advantages to the large-scale production of electricity; 2) Private investment could facilitate this; and 3) Supply by the private sector would lead to a “*virtual monopoly in a commodity which has become practically a necessity of modern civilisation*”. After a careful review of the findings the Transvaal government decided not to act against the VFPTC. In truth it was not able to finance or oversee the building of a large power company, so it allowed the industry to remain in private hands, thus attracting foreign investment, while exercising control through mandatory licences issued by the minister. This oversight would allow for equitable supply, public benefit and safety. In return, expropriation would be possible after 37 years (later extended to 42), a period considered sufficient for investors to generate adequate gains on their invested capital (Marquard, 2004:146) (Conradie & Messerschmidt 2000, 44–45) (Horwitz 1994, p.2) (Christie, 1984:44) (Mountain 1994, p.65). This was achieved through the Transvaal Power Act (Act 15 of 1910), written hastily and passed just three days before the province was amalgamated into the Union of South Africa, which became the basis of government electricity policy in the new Union of South Africa. Requirements of the Act included: The establishment of a Power Undertakings Board, which had the authority to license public power undertakings and their supply area; a concession allowing public roads to be used for electricity reticulation; and an obligation for licensees to charge uniform rates. Uniform rates meant regulated prices according to a supervised rebate system of annual “surplus” profits, which were re-distributed to consumers on a pro-rated basis of their consumption (Horwitz, 1994:2).

As Christie (1984:43) points out, the Commission Report which led to the publication of the Bill (precursor to the Act) pandered to the requirements of the gold mining industry, and only then considered compromises to satisfy the needs of lesser groups such as the coal mining industry and municipalities. Indeed, a proposal in 1907 for Johannesburg municipality to build a power station which would have absolute monopoly of supply within its jurisdiction was rejected outright by Rand Mines who believed that ratepayers would be tempted to tax the mines for the relief of rates (ibid:35). Thus, the Act regulated all power companies supplying electricity to others, but bypassed municipalities who would continue to be regulated by the Provincial Administrators as per the provincial ordinances of 1905 (Mountain 1994, p.65). The Act did however introduce the concept of an electricity “undertaking”, defined as the generation and distribution of electricity in a specific area – for which local authorities were not required to apply for a license in their jurisdiction. Other private sector parties could apply for a license, subject to not being vetoed by the local authority. Section 5 of the Power Act excluded large users from the local authority’s area of jurisdiction - mines, railways and government operations. This provision meant the local authority could not veto such undertakings being supplied by other power generators, which gave VFPTC, and later Eskom, access to its primary consumer base.

Ultimately, the Transvaal Power Act was responsible for regulation until it was superseded by the Electricity Act of 1922, while with regards to licenses and their attached conditions, the Transvaal Power Act was “*effectively preserved*” until 1995, as all subsequent legislation recognised the existing licensing conditions between Eskom and local authorities. Here, all electricity infrastructure was required to relicense in 1995 by the National Energy Regulator (Marquard, 2004:146).

### 6.3.3 A Historical Institutional Perspective and Identification of the First Critical Juncture

Albeit that major towns and mines were investing in electricity for their power requirements, the technology was still very much in its infancy, displaying all the hallmarks associated with an industry in the early stage of development. The Act, informed by the previous year's Power Companies Commission and hastily passed just three days before Union, established the following path dependent processes for ESI: 1) Its allowance for expropriation, created the foundation for a national vertically integrated utility; 2) Cross subsidisation arose as a financial consequence of uniform tariffs; 3) Municipal right to generate and distribute in their area of jurisdiction, eliminated competition, as private companies would have to apply for a license; and 4) Municipalities could not supply large users (mines, government and railways) even in their jurisdictional area, thereby limiting their revenue sources and compromising their ability to operate efficiently.

When seen in this light, the Act appears to be a significant turning point that led to the path dependent process which continues to influence municipal ESI today – particularly because these are the windows of opportunity where decisions taken affect outcomes over the long term, and by implication, complicate and frustrate change. Thus, in applying the historical institutional framework in such an exercise of critical juncture identification, requires: 1) Identifying the appropriate starting point (critical juncture); and, 2) That the analysis considers the sequencing and timing of events that gave rise to the path dependent and self-reinforcing process. Thus, satisfying these two requirements necessitated that the research commence with the concessions issued to the first commercial power plants in 1894, i.e. when commercial electricity was first generated, and then tracking relevant ensuing events, until the theoretical conditions for a critical juncture are satisfied.

Given the seemingly seminal role the Transvaal Power Act of 1910 appears to have played within such a context, it is thus identified here as potentially being the event which gave rise to the first critical juncture (starting point); with the remainder of the research then tracing subsequent events up to 2017, to identify additional critical junctures.

## 6.4 The Union of South Africa (1911-1948)

*“Our gold mines could be described with greater accuracy as gold factories”*

John Hammond (1895), Conspirator of the Jameson Raid (Blainey 1965, p.359)

### 6.4.1 Creating the Economic Rules of the Game

The four states which came together to form the Union of South Africa, did so because they realised it was the only way in which mining could be expanded. In return, and to avoid an over-concentration of political and economic power in mining, it was agreed to allocate a primary national government function to each province. Legislature was allocated to the Cape (Cape Town), the Orange Free State (Bloemfontein) became the judicial capital, Transvaal (Pretoria) the executive capital, and as there was



nothing left to offer Pietermaritzburg (Natal) the province was compensated financially and made the agricultural capital of the country, which in reality amounted to little<sup>49</sup>.

The newly formed Union relied heavily on the revenue derived from the gold mining industry, which was charged a tax to fund the administration and development of the four previous states that were now provinces. This included transport, education for the white population, and other services. Any disruption in the revenue from the gold mines would impact heavily on the Union as a whole (Lumby & Coleman 1983, p.186). Having achieved a five-fold increase in dividend payments in the period 1902 to 1912, the gold mining industry came under pressure with the outbreak of World War I, which raised operational costs with a simultaneous drop in the rate of output. A brief upturn after the war increased the demand for gold, but only for a year, and by 1920 several marginal mines had closed. A low-grade mine commission was appointed and recommended costs could be cut by hiring African workers for certain semi-skilled jobs reserved for whites through various regulations first started in 1898. The white miners would accept pay cuts but not dilute the white to African workers ratio. A strike followed in early 1922 which quickly became politicised. Government's response was brutal and over 230 people died. With the strike crushed, industry retrenched 2 000 white workers, started using Africans for semi-skilled jobs and introduced new equipment which greatly improved productivity. Immediately mines reaped the benefits and profits returned. But there was a price to pay. The force shown by the government shocked many and resulted in greater support for the Nationalist Party (NP) in urban areas, which up until then had been lacking. The NP, which represented rural Afrikaners, formed a pact with the Labour party, which was supported by poor English-speaking workers from the cities. The PACT government won the 1924 elections on a ticket of Afrikaner nationalism and assuring whites that they would not have to compete with Africans for unskilled jobs. The PACT government also pledged to embark on a determined policy of industrialization, which it viewed as a mechanism to address poverty and unemployment amongst the white population. The "civilised labour" policy recognised white trade unions but not black ones. The Industrial Conciliation Act of 1924 and the Wage Act of 1925 restored the previous racially biased policies and regulations, first started under President Kruger in the previous century. (Nattrass 1981, p.163) (Lumby & Coleman 1983, pp.186–189) (Feinstein 2005, pp.80–84) (Bottomley 1993; Archer 1989).

### Developing an Industrialization Policy

Some of the first industries were founded as early as 1910, with the number of factories increasing from 550 to 1 500 in the period 1890 to 1910 (Lumby & Coleman 1983, p.198). Industry benefitted when European factory output declined significantly with the outbreak of the First World War, leading to increased local and international demand. Local industry also benefitted from the introduction of a tariff in 1915 to disadvantage competing imports. Consolidation and state ownership of the South African Railways (SAR) was followed by the decision in 1922 to create the Electricity Supply Commission (ESCOM) to develop the country's ESI and provides further evidence of the government's commitment to industrialisation. In her research on industrialisation in South Africa, Verhoef (1998, pp.17–19) concluded that rapid industrial production occurred after the introduction of import substitution<sup>50</sup> by the PACT government in 1924. State intervention in the economy was intensified by the PACT government, and in

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<sup>49</sup> Explained by Professor Thornhill (9 March 2016)

<sup>50</sup> Import substitution industrialization (ISI) is a trade and economic policy which advocates replacing foreign imports with domestic production. ISI is based on the premise that a country should attempt to reduce its foreign dependency through the local production of industrialized products



1928, Hendrik van der Bijl, having set-up Escom, was asked to create the Iron and Steel Corporation of South Africa (ISCOR), to further exploit the country's rich coal and iron-ore deposits.

Much of the manufacturing sector focused on the needs of the mining industry, and foreign exchange earned from the sale of gold, financed the importation of capital goods and materials to develop this sector. In 1929 the government's mining engineer estimated that gold extraction, a wasting asset, would continue to decline until it ceased to play a meaningful role in the country's gross national product. An industry study a year later, recommended the urgent need for the mining industry to contain costs. With a fixed gold price, gold producers had limited options and faced a tough future. International events intervened when in 1931 Britain left the gold standard and devalued its currency. South Africa, too proud to follow suit, kept the value of its currency but reversed its decision in 1932 when the economic cost became too great. The effect and relief was immediate and the gold price went from 84s to 125s. In 1934 the US devalued its currency and the gold price increased by around \$14 to \$35 (140s). The lifeline thrown to the gold mining industry led to a six-year expansion, as marginal and loss-making mines were once again economically viable and existing mines expanded. Over £80 million of foreign capital entered the country (Lumby & Coleman 1983, p.191). On the back of the gold mining boom, so too did the manufacturing sector flourish, growing at 9% per annum in real terms from 1936 to 1951 and recovering fully from the slump in demand precipitated by the 1929 international great depression, when the value of output had fallen by 19% in nominal terms, and 7% by volume. In addition, the decision in 1933 to exit the gold standard and devalue the currency benefited local manufacturing, because the price of imported products increased. A cycle of cumulative expansion ensued as employment and wage levels increased, which fuelled consumer demand. By 1939 the output volume was double that of the previous 1929 peak, and employment had increased by 60%. New opportunities were created with the outbreak of World War II, and this time round the manufacturing industry was better prepared and equipped to capitalise, which it did. Within 10 years (1939 – 1949) gross output doubled to £400 million (Feinstein 2005, p.123). The biggest transformation during this golden period for manufacturing, was the transition and evolution of the engineering sector. From supplying basic equipment and undertaking repairs for mines, the industry developed mass production lines to service the mines with more sophisticated equipment, while starting to manufacture electrical goods and munitions from ISCOR's high grade steel.

In 1939 General Smuts was voted back into power, opting to stay the course of the industrialisation policy initiated by his predecessors. For the third time van der Bijl was called upon to set up a new state entity. The Industrial Development Corporation (IDC) was set up in 1940 to "*facilitate, promote, guide and assist*" the development of industry by the private sector, through the provision of loans or the acquisition of shares. Tariff protection intensified and expanded. No longer was it necessary to demonstrate market potential for the tariff to be granted. Henceforth, specific industries would qualify if pre-determined criteria were met. Industries which benefited included agricultural implements, electric motors, the manufacture of yarn and cloth, pulp and paper, certain chemicals and sheet glass. Manufacturing during this period shifted to a production or assembly line system characterised by limited, repetitive and specialised activities. The implication though was a greater requirement of unskilled labour and a reduction in the need for skilled white labour. But South Africa's industrialization policy appeared to be working. The economy was growing, jobs were being created and the country was transforming to an industrialised state. The growth of the economy and the protection of white jobs can be seen in Table 6-3. However, the foundation on which the manufacturing sector rested was not sound for two counteractive reasons, which would undermine future efforts to develop the economy further: The first, was the size of

the market, which was just not big enough to accommodate meaningful economies of scale, compounded by the purposeful exclusion of the black population, resulting in sectors being dominated by a few companies, and often just one, creating an oligopolistic market. The second was a low level of efficiency, a consequence of operating in a market where products are protected by tariffs and import quotas. Feinstein (2005, pp.128–130) argues that a system based on discrimination and inequality was carried from the agricultural to the mining sector. These two sectors could operate on a low productivity and low efficiency basis, but such an approach could not support the development and sustainability of secondary sectors, such as manufacturing and construction. In the first place, the minerals were absorbed internationally, meaning that mining companies had little regard for the size and prosperity of the local market. For manufacturing companies, who could not sell internationally due to their inefficiency, the local market was their life blood. Low wages paid by the mining and agricultural sectors constrained incomes and by default shrank the size of the local market. Additionally, most labour hired for farms and mines was unskilled and there was no perceived benefit to training or loyalty. This was not the case in manufacturing where well trained and motivated staff could and would improve productivity. In 1938/39 the net output per employee in manufacturing was 70% of that attained in New Zealand and Australia and less than 60% of the Canadian figure (Feinstein 2005, pp.131–133). A final item of concern was the impact that the tariff policy to protect the manufacturing sector was having on the gold mining industry, which was providing all the foreign exchange to purchase capital equipment and raw material for the manufacturing industry. Arguing against the tariff policy, Laight (1955, p.217) noted: *“despite all sophisticated evidence to the contrary, a policy of tariff protection can be expected to raise the price of these goods upon which duties are imposed and indirectly, the general level of prices and wages”*. Thus, mines were paying higher prices for locally manufactured goods. This increased their cost base but could not be passed onto the consumer as the price of gold was fixed. Ironically, the competitiveness of the industrial sector, or lack thereof, directly impacted the profitability of the mining sector on which it relied, and which it was specifically created to replace. (Feinstein 2005; Natrass 1988; Bonner & Posel 1993; Lumby & Coleman 1983; Natrass 1981; Archer 1989; Laight 1955)

Table 6-3: Output and Employment in Industry (1916/17 – 1948/49)

Census year	Gross value of output (£m)		Number of employees (000)			Whites (% of total)
	Current Prices	At 1938/39 Prices	Total	White	African	
1916/17	49.5	39.4	124	46	78	37.2
1924/25	84.2	66.7	192	71	121	37.1
1929/30	111.8	98.1	218	91	127	41.6
1932/33	91.0	91.4	192	87	105	45.3
1938/39	199.6	199.6	352	145	207	41.1
1948/49	674.6	402.2	668	225	440	34.1

Source: Feinstein (2005)

## 6.4.2 Consolidating the Electricity Supply Industry to Create a State Monopoly

### The Establishment of a Municipal Association for Electricity

Local authorities continued developing their electricity supply infrastructure to supply residents with power; and up until 1922, the industry was made up of private and municipal enterprises (Horwitz, 1994:2). Unsurprisingly, the large number of power suppliers resulted in chaotic conditions, with little

legislation, regulation and standardisation, and a diverse range of provincial acts and municipal bylaws governing the electricity supply industry. Different supply voltages were used across the country and many consumers were supplied with direct current (AMEU 1995, p.11) (Steyn 2001, p.62). To address this, 22 engineers from 17 municipalities came together to form an association to cater for the needs of municipal electrical engineers. The Association was formed in 1915 and named the Association of Municipal Electrical Engineers (known in 2016 as the Association of Municipal Electricity Undertakings, AMEU). The second conference, attended by 31 members, met in 1917 and discussed a wide range of topics, *inter alia*: product standardization, the conservation of energy resources, but most notably, to promote the standardisation of income derived from electricity sales. The Association from inception voiced its disapproval of the local government practise of electricity surpluses contributing to the relief of property rates, referring to it as “*licensed robbery*” (AMEU 1995, p.16).

#### A Fork in the “Track”: How the South African Railways (SAR) Irrevocably Changed the National ESI

The next major landmark after the Transvaal Power Act of 1910 was the 1922 Electricity Act, the result of two reports, both undertaken by Merz and McLellan. The railways had considered different schemes to electrify the railroad since the turn of the century, but these were not implemented due to technology deficiencies, a lack of large-scale generation and the outbreak of World War I. By 1916 though, all railway lines from the four provinces and the harbours had been incorporated into one entity, the South African Railways (SAR), which provided focused impetus to finally achieve electrification. Sir William Hoy, the general manager of SAR, thus commissioned Merz and McLellan (MM) in 1917 to conduct a study on the possibility and viability of railway electrification in South Africa (Marquard, 2004:146). The study identified key routes, but its biggest contribution was the broader question of electrification in South Africa and the economies of scale that could be achieved by supplying both railways and industry. This led to MM being appointed by Prime Minister Jan Smuts in 1919 to undertake a second report on the electricity industry as a whole. The Merz report, as it came to be known, warned against a fractured electricity supply which was believed to have constrained economic growth in England (Horwitz: 1994:3), and recommended a centralised approach to regulate and unify electricity supply in the country. The government appointed a committee, under the chairmanship of Sir Robert Kotze (who undertook the 1909 Power Commissions study and participated in the drafting 1910 Transvaal Power Act) to review the findings and propose what action should be taken. The committee supported the Merz findings and recommended an even more ambitious programme. For example, Merz followed the English model whose aim was to control and regulate the electricity industry, while the committee drafted legislation, authored by Kotze and Hendrik van der Bijl, recommending a commission be set up to not just oversee, but run, the electricity industry. Persistent mining and municipal power-worker strikes, working conditions, the implementation of racial policies and the effects of the Great War, all needed to be considered by the Prime Minister. But the real conundrum was set by the railway’s Sir Hoy, who stipulated that while SAR had no intention of building its own power stations, it was averse to procuring power from private suppliers or electricity undertakings (Jacobs 1941, p.18). The railways needed a reliable power supply, which was not certain from strike prone municipalities from 1918 - later culminating in the Rand Rebellion, the election loss and the new government’s civilized labour policy (Horwitz 1994, p.3). In addition, Hoy did not believe that municipal tariffs would be as “*it might be*” (Christie 1984, p.55), meaning that Hoy, beyond possible unreliability, also regarded municipalities as potentially expensive; and thus was not willing to build railway lines where the electricity supply was municipal. The trajectory to these future events was in full motion at the time that the report was being written in 1921/22, within an increasingly unstable environment, making SAR’s

demand for power from a publicly owned utility more likely to convince the Prime Minister to implement the recommendations of the committee. This took the form of the Electricity Act of 1922 and in Horwitz' view reflected the call to secure reliable and cheap electricity supply, particularly for mining and railway electrification.

The objectives of the Act were to be achieved through the creation of the Electricity Supply Commission (Escom), whose mandate was to supply electricity to "*Government departments, the South African Railways and Harbours Administration, local authorities, companies and other persons carrying on industrial undertakings or to any persons whatsoever in the Union*" (Electricity Act 42 of 1922, Section 3:476). The Act also called for the creation of an Electricity Control Board (ECB) to license and regulate electricity undertakings. In future, all electricity undertakings would require a license to generate and supply electricity. Exempted from obtaining a supply license were any government departments and local authorities supplying within their area of jurisdiction. The Act established the general principle that Escom's undertakings "*be carried on neither at a profit nor at a loss*" (Electricity Act 42 of 1922). The Act thus set up the institutional structure for the creation of a large, single supplier of electricity for large industry and rural areas, but had to recognise the existing municipal producers who would retain the right to decide on urban generation and distribution. The Act, whether by design or not, protected the revenue stream municipalities enjoyed from the surplus derived from their MEU's. It also gave them the flexibility to abandon their MEU's by entering into pooling or other agreements with Escom, which many did. Furthermore, the right to expropriate power stations after 38 "plus two years" was confirmed. Wide-ranging powers such as the granting of water rights, and expropriating land and streets for reticulation and distribution, were given to Escom. Finally, the Act accorded Escom "expert status" on request. This implied that any extension to an existing or application for a new power station by a municipality could be referred to Escom by the provincial administrator. This gave Escom the ability to influence the final decision of a licence application process, based on its own vested interest. If a MEU planned to increase its generation capacity by an amount exceeding 10% of its existing generating capacity in any 12 month period, the Act required an Escom evaluation to ascertain whether Escom itself could supply ratepayers more advantageously (Electricity Act 1922, sec.38). The provincial administrator was not bound by Escom's recommendation, and in 1936 in advising the Johannesburg Municipality, MM consulting engineers believed adjudications would be fair (McLellan 1936), as there was a precedent of the administrator adopting decisions contrary to Escom recommendations. This turned out to be an overly optimistic assessment, as Escom recommendations "*invariably carried the day*" (Conradie & Messerschmidt 2000, 74–75).

### VFTPC Expropriation and the Rise of Escom

The newly formed Escom wasted no time in exerting its authority. The VFTPC application to build a major power station in Witbank was immediately opposed by Escom, even though Witbank had large quantities of coal, and technical advances in long distance transmission made such a plant viable. Escom argued that the VFTPC would make large profits at the expense of mines and industry. A compromise was reached whereby the plant would be owned by Escom, but designed, built and operated by the VFTPC, who also agreed to share mining revenue with Escom. The plant was completed in 1926 and although very lucrative for VFTPC as no capital outlay was made, was the beginning of the end of its operations in South Africa. All future power stations were built on this basis, until expropriation was invoked, and its assets sold to Eskom for £14.5 million pounds in 1948 – the single biggest financial transaction in South Africa at the

time. The expansion of the SAR network provided the base load needed to make Escom's regional undertakings viable. Thus, by 1948, Escom was the main supplier of bulk electricity in the country (Marquard 2006; Horwitz 1994; Conradie & Messerschmidt 2000).

#### [Merz and McLellan: Electrical Engineering Consultants Extraordinaire!](#)

It is worth pausing here to recognise the role played by MM and its significant influence on the ESI in South Africa during these early years. The firm was founded by Charles Merz and William McLellan in Newcastle upon Tyne in 1902. The partnership was instrumental in designing the United Kingdom's first three-phase electrical supply network on Tyneside, and continued to advise Commonwealth countries on setting up their own networks for the next century. Table 6-4 provides a timeline of the firm's most important projects in South Africa, largely managed by Merz up until his death in 1940 by a bomb from a German air raid at his home in London. McLellan had died in 1934. What makes their contribution all the more remarkable, was that their services were sought by national government, municipalities (Johannesburg, Cape Town and Durban amongst others), the Electricity Control Board, SAR, Escom and VFTPC. Assignments overlapped and it is difficult to see how this did not create a conflict of interest, by creating (certain) opportunities for additional work. There is little doubt from all the literature that they were very highly respected by all their clients and appear to have had the best interests of the country's ESI at heart. The consultancy operated in South Africa until 2010, when its operations were bought by Mott McDonald; but it is the firm's early years that are of interest.

Table 6-4: Timeline of Major Work undertaken by Merz McLellan (MM) – 1918 to 1940

Year	Description of Work
1918	Contracted to report to South African Government on electrification of railways
1919	Railway electrification report presented by Merz to General Smuts and Sir William Hoy (SAR) Firm appointed to report on electric power supply for the Union (Merz Report)
1920	Appointed to consider first electrical scheme for the railways (Maritzburg to Durban). Work postponed for technical reasons
1921	Appointed to electrify Glencoe section of railway (Maritzburg). Construction commenced in 1922
1922	Subsequent to 1920 power report, the Electricity Act of South Africa passed
1923	Consulted on the formation of the Electricity Commission (Escom) and Electricity Control Board (ECB) Supplemental agreement with High Commission (electricity) signed VFPTC appoint MM to represent them for the new Witbank generation license application to ECB MM broker the heads of agreement between VFPTC and Escom, which is approved by ECB SAR appoint MM to electrify suburban railways in Cape Town MM advise on the structure of the Cape Town Electricity Undertaking and construction of power station
1924	MM appointed by Escom to construct Salt River and Congella power stations Agreement for Witbank power station between VFPTC and Escom concluded in London by MM Electrical engineer of Durban, after a visit to London, appoints MM to undertake a study on how best to replicate the Cape Town arrangements Heads of agreement (prepared by MM) signed between Durban Municipality and Escom
1925	Construction of Congella power station started and Colenso station completed
1928	Escom cancel agreement for MM to operate the Salt River power station. Construction contracted was unaffected
1932	Merz invited to South Africa to finalise the pooling agreements between Escom and Cape Town
1933	Chairman of Escom (v d Bijl) enters into a new retainer and general advice agreement with MM VFPTC seek advice on construction of a new power station on Klip River (Johannesburg)
1934	Escom invite MM (Merz) to visit South Africa to discuss Klip River power station. Heads of agreement between Escom and VFPTC signed. MM and VFPTC jointly designed and built the power station
1935	Final Klip River and Witbank supplemental agreements signed in London MM advise Cape Town Municipality on tender to build the new Table Bay power station Permanent office in SA. Meetings held with all the major MEU's, Escom, VFPTC, national government, ECB and the railways

*Source:* Merz and McLellan archives

### 6.4.3 A Historical Institutional Perspective

#### Political and Economic Overview

Union saw the Boer Republics being able to sway events to entrench white supremacy, achieved through the introduction of new, and amendment of existing laws and regulations, to marginalise all non-white people (displacement and layering). By example, regulations first started in 1898 to protect white jobs, were constantly amended and added to, as new job opportunities arose (Chapter 6.4.1). The amplification of increasing white socio-economic benefits (increasing returns) was self-reinforcing, as the elite group sought to maximise its position. Unsurprisingly, its path was quickly entrenched and gained strong momentum. This is demonstrated by government's futile attempt in 1922 to limit and challenge the privileged status of unskilled white workers, to improve industrial competitiveness. Indeed, the so called "Rand Rebellion" manifested in an election loss that saw a conservative government take control, which

resulted not only in the immediate purging of reforms, but the tightening thereof. This period can thus be characterised as a positive feedback loop.

### Electricity Supply Industry

When viewing events through the lens of historical institutionalism, Chapter 6.3.3 identified the Transvaal Power Act (1910) as the critical juncture, or starting point, which shaped the country's ESI legislative and operational framework until 1995; with certain remnants still in effect in 2017. Here then, in Chapter 6.4, we considered the next period (1910 – 1948) and the factors that led to institutional reproduction, or lock-in. In other words, we explored the question of what it was that occurred during this period that allowed the contingent event of the Act of 1910 to gather sufficient momentum, to the extent that other plausible alternatives were not considered, thus allowing its state of dominance to be consolidated and to endure.

Seen in this light, it is important to note that the Transvaal Power Act did not lead to immediate change, but set the foundation. As Pierson (2000) states "*large consequences may result from relatively small or contingent events*". In our context, this consequence was the creation of Escom twelve years after the passing of the Electricity Act (1922), in an example of punctuated equilibrium. As Baumgartner and Jones (2002) explain, the signature characteristics of punctuated equilibrium are long periods of relative stability, separated by periods of disjointed and dramatic change. Tracing the historical events, we see that the amalgamation of the four provinces and outbreak of the World War I had a depressing effect on the economy. During this period the municipal ESI began consolidating its operations, such as forming the AMEE (AMEU) and standardising operational practises etc. With the war coming to an end and a greater demand for gold, the economy started to expand. By this time the SAR had consolidated all the railway lines from the four provinces into one entity and it could now look towards electrifying the railroads. MM were commissioned to propose how best this could be achieved. This period was one of stasis, a negative feedback loop, where the status-quo was maintained. But, the combination of the MM report recommending centralised supply and SAR's pronouncement that although it had no interest in generating power, it would not take supply from municipalities, emboldened Kotze and van der Bijl to push for the formation of the electricity supply commission (Escom), which would not oversee, but run, the ESI – the punctuated equilibrium of the Electricity Act (1922). This Act thus reinforced the path chosen by the 1910 Power Act, in an example of layering - the introduction of new rules on top of or alongside existing ones. The municipalities (targeted institutions) had limited ability to insist (level of enforcement) that SAR take power from them within their jurisdiction. Furthermore, the characteristics of the political context (SAR's decision, recommendations of the MM report) provided the veto capability needed to push through additional powers to the newly formed Escom, at the expense of the MEU's. Kotze and van der Bijl, as per Mahoney and Thelen's typology are thus categorised as subversives – displacing an institution without circumventing rules, or resorting to conflict or force (insurrectionaries). Marquard (2006) came to the same finding in his explanation (detailed above) that the Power Act was effectively preserved until 1995, implying it was not removed (displacement) or that the existing rules were changed due to their strategic redeployment (conversion).

From this point on then, we witness Baumgartner's "dramatic change" of a positive feedback loop. We see Escom develop from a zero base to take control of the ESI - made possible by a conducive legislative framework and national objectives of the newly developed industrialisation policy. These shift events from a negative to a positive feedback loop, which saw Escom, bit by bit, dismantle VFTPC until its



expropriation in 1948 (as detailed above - 6.4.2). Although not immediately evident while Escom was busy frying the proverbial bigger fish of the VFTPC, the 1922 Act would also have dire consequences for the MEU's, as explained in significantly more detail later.

For now, in analysing the new era of the positive feedback loop - a self-reinforcing process which accentuates or amplifies a trend - it is evident the process ramped up over time and that its implementation was not as dramatic as its creation. Indeed, changes were incremental in nature and achieved by giving institutional actors the discretion to interpret or enforce institutional rules to achieve their objectives (Mahoney & Thelen 2010). For example, Escom was consulted and afforded the opportunity by the provincial administrator to comment and even object to new MEU power plant applications; while Escom's response was based on its ability to meet demand and little else, which the administrator more often than not followed. This inconsistent approach had major financial implications for the MEU's and ultimately brought about an instance of conversion, with government and Escom making use of all the types of gradual change (Chapter 2.4) in its achievement. Here, examples include: 1) Drift, where the impact of existing rules is changed due to shifts in the environment; effected by disallowing VFTPC to build a new plant in Witbank on the grounds of excessive profits, but approving the application when Escom was given a controlling stake; and 2) Displacement, (the removal of existing rules to replace them with new ones), by denying VFTPC water access rights, but approving these for Escom.

In the section that now follows, the way Escom turned its attention to the MEU's - having essentially disposed of VFTPC - is detailed.

## 6.5 The Apartheid Years (1948 – 1994)

### 6.5.1 Apartheid Economics: Boom to Bust

The era of formal segregationist policies under apartheid, is a tale of two stories. The first, is the NP's election success, which was achieved without any clear understanding, even within itself, of what apartheid actually meant, other than to continue and strengthen the existing segregation policies - which it did. This was exacerbated by the strong global economic growth following the end of the second World War that the South African manufacturing industry capitalised upon; the discovery of new and rich gold fields in Orange Free State; and a 40% increase in the price of gold from the devaluation of the British and South African currencies – whose combination contrived to mask the weak foundations on which the country's economy was built. Under apartheid, the country was always on borrowed time both politically and economically, albeit behind a temporary mask. The second part of the story starts in the early 1970s, when the mask began to slip and the system began its slow but inevitable collapse, culminating in the country's democratic elections in 1994.

#### The Golden Years of Gold (1948 to Early 1970s)

The manufacturing industry was better established and diversified when war began in 1939. The disruption of imports during the war created opportunities for local manufacturers to develop new capacity and to strengthen their position. During, but especially after the war, the surge in global demand for goods, was not easily satisfied by countries whose factories were idle, destroyed or converted to support the war effort. South Africa benefited from the international pent-up demand for commodities



and manufactured items, but simultaneously itself was a big importer of capital goods for the manufacturing and mining industry. Even a capital inflow of R580 million in 1947 and 1949 was insufficient to offset the deficit on the current trading account. Government did not stall when the British devalued their currency in 1949 and followed suit immediately, while the higher gold price increased the value of exports. This was still insufficient to cover the balance of payments, as capital goods and immigrants continued to enter the country. Import restrictions were imposed as an additional measure to reduce the balance of payments deficit, which also aided the manufacturing industry. Government acknowledged that these actions were short term solutions and that in the long-term exports would have to be increased. Manufacturing was expanded, particularly in metals, engineering, textiles and chemicals. (Nattrass 1981, pp.164–169) (Lumby & Coleman 1983, pp.220–225) (Bonner & Posel 1993, pp.43–45) (Feinstein 2005, pp.165–172) (Clark 1994, p.134).

South Africa's contribution to the war effort was supplied by state corporations grasping the opportunity to bolster local industry. During this process, the conditions under which state corporations were forced to operate exposed their limitations, which together with the expanding markets enjoyed after the war, provided van der Bijl insight on what could and could not be achieved. A new basis of operation for state corporations was decided upon by van der Bijl: monopolisation of the markets and fragmentation of the workforce, achieved through the physical decentralization of industry. In this way, the state could control markets and labour (Bonner & Posel 1993, p.77) (Addleson 1990, p.102). To this end, the IDC started supporting the creation of consumer industries to create work opportunities and reduce the cost of living. Textile manufacturers were favoured and had the added advantage of lower capital costs compared to the "commanding heights" industries of Iscor and Escom.

An additional *modus operandi* of the IDC was to create monopolies in the industries in which it invested, crushing local competition by being the lowest cost producer. This was to be achieved by locating the factories in rural areas which would secure cheap (black) labour, as whites were unlikely to settle in these areas for unskilled to semi-skilled job opportunities. Electricity would be supplied by Escom and not the local municipality, further reducing input costs. The placement of the factories also served the political objective of segregation, by creating job opportunities for African workers in homelands and out of the white areas (Bell 1973, p.252) (Ratcliffe 1979, p.264). Government believed that rural labour forces were less likely to be politically influenced by the large working class in the cities, but this ultimately made little difference, as wages were so low and conditions such that many left their jobs to seek better opportunities in the cities. In the final analysis, government's decentralization policy, which disrupted free market forces, manipulated labour and created massive costs by using resources ineffectively and inefficiently, outweighed any benefits of a more geographic distribution of industries (Verhoef 1998, p.19).

IDC activities were not limited to medium sized enterprises however, and two investments in the 1950s dwarfed all previous undertakings. The first was FOSKOR (Phosphate Development Corporation) which manufactured industrial fertilizers, and then SASOL (South African Coal, Oil and Gas Exploration) set up to convert coal into gas and then gas into petrol. These projects were too large for the private sector and also strategic - providing perceived protection against sanctions. By 1973, the IDC had a portfolio of assets valued at R484 million; and the development of state corporations is summed up by Clark (1994, p.163)

*"By 1960 South Africa's state corporations were firmly implanted in a socioeconomic system that carefully protected the interest of the white electorate and the dominant mining industry at the expense of the African majority. The mine owners were no longer threatened by government*

*supported industries – such as Kruger’s – in which they now held a measure of control through investments and close business relationships.”*

A sustained period of economic expansion was crowned by the “great boom” of the early 1960s. The “boom” followed another balance of payments crisis (1960/61), the biggest since the Second World War. This crisis was not economic but was precipitated by political concerns: South Africa declaring itself a Republic; the Sharpeville massacre (1960) and other political protests; the imposition of a state of emergency; and political and military events in Rhodesia and the Congo. Vast sums of money were withdrawn by foreign investors, but this was short lived. Confidence was restored, the economy recovered, and foreign money was again entering the country to cover the balance of payment shortfalls. The country’s GDP grew at an average rate of 5.6% per annum in the six years from 1960 to 1965 (Lumby & Coleman 1983, p.227).

Two additional features marked the 1960s. One was the mechanisation of mining activities as mines replaced steam with electricity; made possible by Escom’s new power plants which provided reliable and affordable electricity. The second feature was the expansion of the financial sector and the rise of Afrikaner capitalism, which became a reality during this period. Government moved all its accounts to Volkskas bank and other Afrikaans owned financial institutions, while Sanlam, an insurer established in 1918, acquired many companies at rock bottom prices in 1960 when foreign companies sold in a rush to leave the country. Anglo American, the country’s largest mining company accepted the political benefits of partnering with Afrikaans companies and sold a large stake in one of its mining houses to Federale Mynbou, a Sanlam subsidiary. The Rupert family’s Rembrandt Corporation, which had done well selling wine and brandy during the war years, expanded into cigarette manufacturing, making use of Afrikaner nationalism and cultural symbols (Feinstein 2005, pp.176–179). The diversification of the economy was evidenced by the manufacturing sector contributing more to the country’s GDP than the combined contributions of the mining and agriculture sectors for the first time in 1954 (Table 6-5).

Table 6-5: Contribution of Commodity Production to GDP (1948-70)

Year	Agriculture	Mining	Industry	Ratio of share of industry to share of agriculture and mining
1948	16.4	10.0	23.3	0.88
1954	16.1	10.4	26.4	1.00
1960	12.4	12.7	26.6	1.06
1965	10.1	11.0	30.4	1.44
1970	7.9	9.0	30.8	1.81

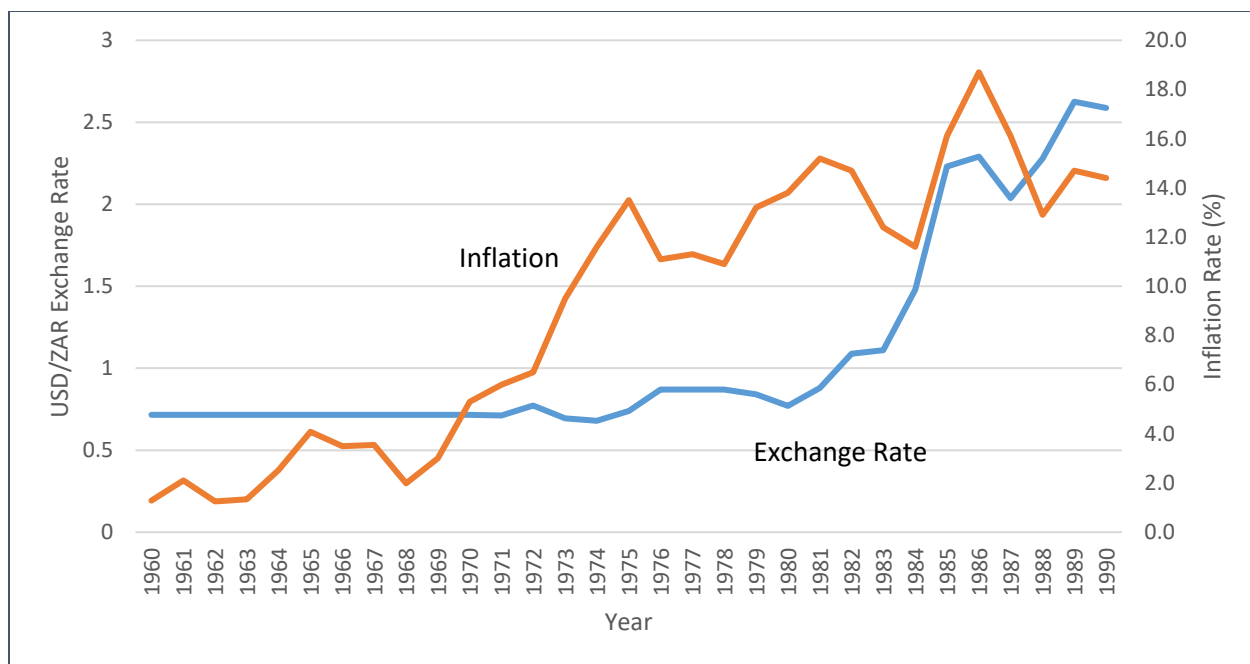
*Source: Feinstein (2005) pg 144*

However, these results were largely driven due to a period of sustained global economic growth following the end of the war and the discovery of substantial new gold and other minerals (coal, uranium, copper, iron ore and platinum). The country’s fortunes turned in the early 1970s for three reasons. The first, was the reduction in gold output as mines aged; reducing the much-needed foreign exchange to import capital equipment. The second, was the global oil crisis and increasing political hostility to apartheid. The final, and undoubtedly the most fundamental, was the country’s low level of efficiencies and the high costs of production in the industrial sector, which were first created when the labour model used on the farms and mines was imposed on the industrial sector - complicated further by government policies of decentralisation, monopolistic companies, import substitution and race policies. Just as the country

looked to the industrial sector for future growth and prosperity, it became evident that the sector was not self-supporting or independent, and had a low competitive capability (Feinstein 2005, p.202) (Lumby & Coleman 1983, p.227) (Verhoef 1998; Nattrass 1981; Clark 1994; Laight 1955).

#### Apartheid's Inevitable Collapse: (Early 1970s to 1994)

By 1970, South Africa's industrial structure had experienced significant sophistication. Large sums had, and were being, invested in the country's infrastructure; with over 5 000 kilometres of tarred roads delivered by the late 1960s and a further 6 000 kilometres commissioned; dedicated rail lines serving the mining industry being built; while Eskom was in the middle of one of the world's biggest new build programmes, with 3 500 MW under construction in 1969 and plans to add a further 25 000 MW by 1979 (Marquard 2006, p.155). Manufacturing too had progressed beyond the first phase of producing consumer goods, to now producing intermediate and capital goods. However, two factors meant it was unable to achieve autonomous growth and independence from the mining, and to a lesser extent, agricultural, sectors: continued reliance on imported goods and raw materials to deliver a final product, and limited international demand for its products. Thus, the industrial sector continued to rely on the foreign revenue earnings from the primary sector. In 1975 the surplus from agricultural exports was R456 million and R2 212 million from mining. The deficit for the industrial sector was R3 913 million. South Africa's current account balance is shown in Figure 6-2 below, depicting the current account deficits during the 1970s, with surpluses attributed to increases in the gold price, in mid-1973 and 1978 - 1980 when the gold price exploded (Simkins 1999, pp.20–22). Mining and agriculture could not cover the foreign exchange deficit; and the pursuit of industrial development, and ultimately job creation, expanded the industrial base but failed to create independent industrial development (Lumby & Coleman 1983, pp.235–235). The 1970s global phenomenon of stagflation reduced international trade, and during this time, South Africa had a strong, overvalued currency, which offset the large increases in the gold price (average price: \$35 in 1967; \$154 in 1974; and \$615 in 1980 – peaking at \$850 – see Figure 6-4. Imports, however, and especially oil, went up as international prices rose and South Africa itself entered an inflationary cycle, going from around 3% in 1970 to over 13% in 1974, while the Rand retained its value (Figure 6-1). These events created a double whammy: On the one hand gold earnings remained static while import costs increased and on the other hand the strong currency meant that South African exports became more expensive, thus less competitive, resulting in established trade levels dropping. The net result was additional pressure on the trade balance account, which constrained growth. A new strategy was needed.



Source: World Bank and Inflation.eu<sup>51</sup>

Figure 6-1: Rate of Inflation and US\$ / ZAR Exchange Rate, 1960 - 1990

The 1971 Reynders Commission, appointed to investigate export trade, concluded that: the small size of the domestic market offered limited opportunities; being a signatory to General Agreement on Tariffs and Trade (GATT), which promoted “open” international markets, meant it was expected to liberalise its local markets; the policy of import substitution had reached its limits and could impact negatively on the price of goods for consumers, mining production, agriculture and on exports (Ratcliffe 1979, p.266); and finally, capital inflows could no longer be relied upon. These factors would collectively place further pressure on the balance of payments. The economy, it concluded would have to re-orientate from import substitution to the promotion of exports – *“the country appears to be confronted with a fundamental choice: a lower rate of economic growth or more intensive efforts to increase exports”* (Reynders 1972, p.18). The findings signalled the formal shift from an inward to an outward industrial policy. Market orientated trade policies were accelerated after the two-tier gold market eased balance of payments constraints in 1969. These actions instantaneously highlighted the inefficient state of local manufacturing, after decades of protectionist government policy (Ratcliffe 1975, p.45), which masked skill shortages, high costs and low productivity. If South Africa was to maintain, let alone increase, its exports, its Industry needed structural reform. The answer was seen to be in the greater beneficiation of primary products and developing the capability to produce more sophisticated products to more easily compete on world markets. Government targeted specific sectors; most notably chemicals, textiles and the motor vehicle industry, which received incentives, tax subsidies and other support mechanisms. A failing of the Reynders report, and ultimately the outward looking or export orientated strategy, was the cursory treatment of the fundamental weaknesses of the South African manufacturing industry (listed by Ratcliffe above). As summarised by Feinstein (2005, p.193), with the global economy in recession and growing concerns about South Africa’s racial policies, there could not have been a worse time to switch to such a policy. There was

<sup>51</sup> <http://www.inflation.eu/inflation-rates/south-africa/historic-inflation/cpi-inflation-south-africa-2012.aspx>

also strong empirical evidence at the time to suggest that export incentives do not necessarily result in increased export or manufacturing volumes (Feinstein 2005; Verhoef 1998; Addleson 1990; Lumby & Coleman 1983; Nattrass 1981; Laight 1955; Reynders 1972; Ratcliffe 1975; Ratcliffe 1979; Bell 1975; Smit 2009; McCarthy 1988).

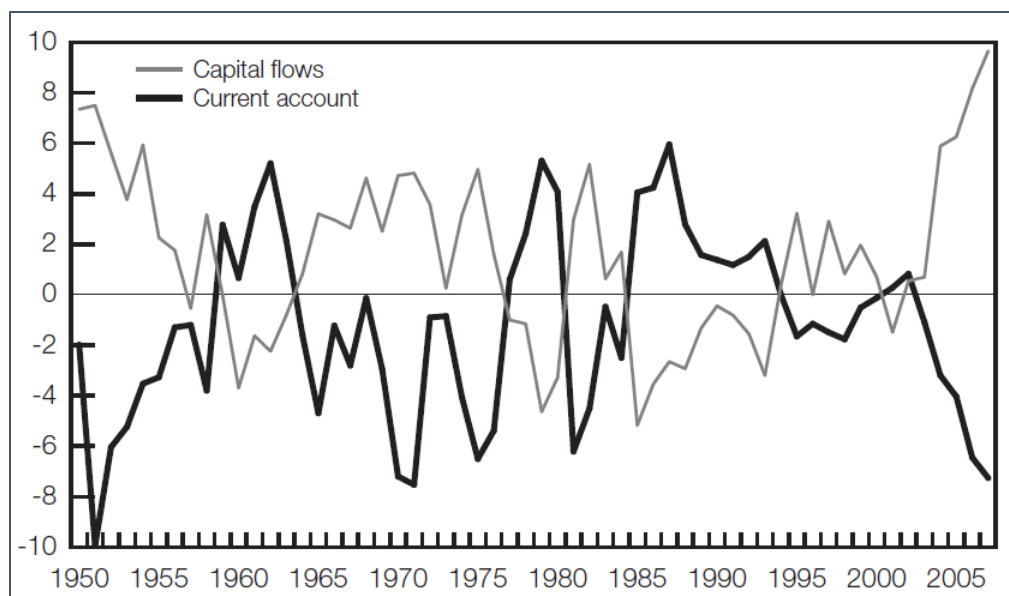
The dominance of the mining sector in the overall economy also made change in strategy more difficult. Industrialisation had taken a very particular form, which evolved and became entrenched as time passed. This phenomenon, unique to South Africa, was developed and termed the “Minerals Energy Complex” (MEC) by Fine & Rustomjee (1996). Under the MEC, South African industrialization was driven by mineral extraction and energy generation. Downstream sectors and linkages amongst them, including financial services, developed to support the MEC.

*“...what will be termed the MEC lies at the core of the South African economy, not only by virtue of its weight in economic activity but also through its determining role throughout the rest of the economy.”*  
Fine & Rustomjee (1996, p.5)

Freund's (2010, p.18) economic historiography of South Africa under the MEC, points out that Fine and Rustomjee focus on heavy industry and energy rather than mining, as it is these services which ultimately determine the price of mining itself. With South Africa using the bulk of its coal to generate electricity and 40% of that generation being used for mining operations (at the time of writing in 1996), the country was, and had always been, highly energy intensive. South Africa's electricity usage per capita in 1996 was comparable to that of the United Kingdom; but when considering that in South Africa less than 20% is used by the residential sector, it is immediately evident that the entire system evolved around minerals:

*“...the MEC has left the economy with both strengths and weaknesses. The strengths arise out of the productive and infrastructural capacities that have been built around its core sectors. The weaknesses arise from the failure of this to be vertically integrated forward into the rest of the economy.”*  
Fine & Rustomjee (1996, p.252)

Once again fortune intervened in 1971 when the gold price moved from a fixed (\$35) to a price set by the market. The price increased steadily for the rest of the decade as global investors hedged against international inflation and geopolitics, but benefits to the balance of payments were largely offset by the strength of the Rand. The economy received a brief respite when the gold price rocketed to US\$850 in 1980 and a positive current account balance was possible (Figure 6-2). The price quickly retreated and remained range bound (\$300 to \$400) until the early 1990s (Figure 6-4). The economy entered a thirteen-year period of stagnation (1981 – 1994), due to factors including: a weak global economy and high oil prices; international condemnation of apartheid, epitomised by P W Botha's infamous “Rubicon” speech in 1985, which led to massive disinvestment and to international banks freezing further loans - forcing the government to suspend debt repayments; political unrest and frequent labour disruptions; and a gold mining industry in decline. Drastic actions were taken to meet the terms of the international debt repayments. This was done by sacrificing growth and retaining a surplus on the current account, while high duties were levied on imported goods and interest rates were increased to reduce aggregate demand. Exports were promoted by allowing the Rand to depreciate sharply (Figure 6-2). (Feinstein 2005, pp.229–233) (Smit 2009, pp.68–69)

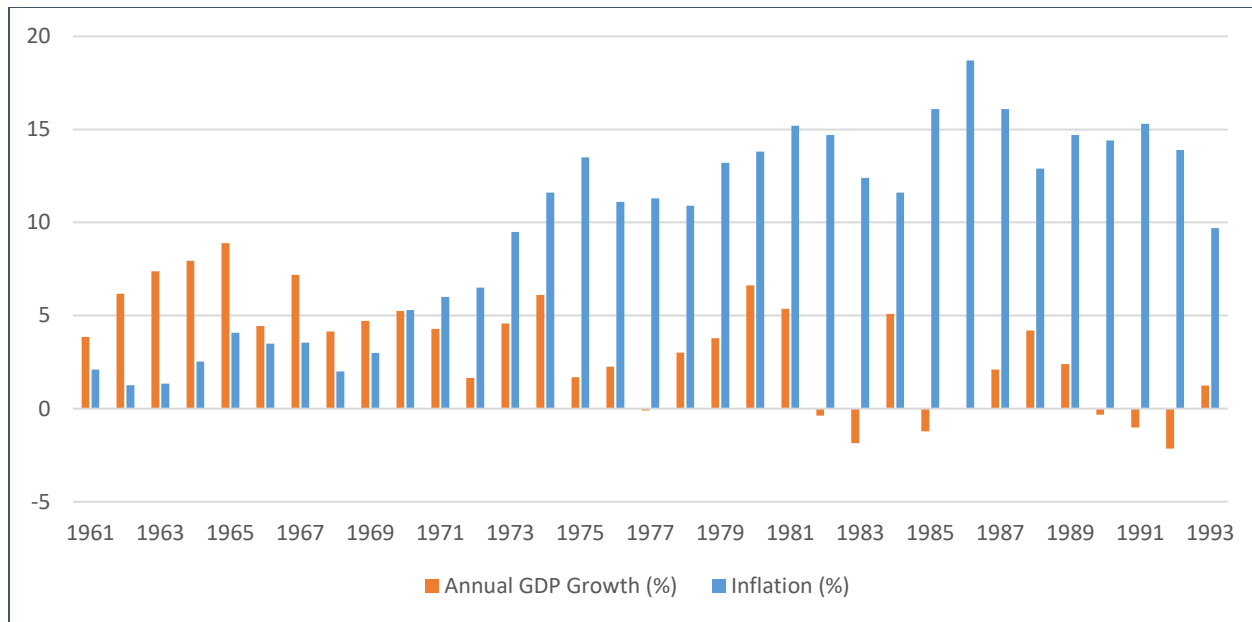


Source: Smit (2009) South African Reserve Bank

Figure 6-2: Current Account Balance and Capital Flows as a Percentage of Gross Domestic Product (1950 – 2005)

### Concluding Comments on the Political Economy under Apartheid

Despite political unrest, South Africa could participate in the international post-war boom and grow its economy in the two decades after World War II. By 1970 real per capita income had grown by 70%. Real GDP grew on average by 4.2% and 5.5% per annum in the 1950s and 1960s respectively. During this 20-year period, inflation averaged a reasonable and healthy 3.1%. The turning point came in the early 1970s. The NP, buoyed by the economic growth and its entrenched position as the ruling party, continued with its political and economic policies, oblivious, or perhaps arrogantly ignoring the signs that the tide was turning. GDP volatility increased, with lower growth at an average 3.3% per annum and inflation averaging 10.3%. By 1980, the economy stagnated and retreated for the next 15 years. Figure 6-3 shows inflation and GDP growth rates for the period 1961-1993. By 1994, the real per capita GDP was 16% lower than the 1975 peak of R7 291 (1990 prices) (Simkins 1999, pp.12–13).



Source: World Bank and StatsSA

Figure 6-3: GDP Growth Rates and Inflation Rates (1961 – 1993)

Research undertaken by Moll (1991) which questioned whether the apartheid economy did indeed grow “exceptionally quickly”, second only to Japan from 1945 to 1970, found this not to be the case. Under Moll’s approach, an economy is deemed successful if it grows in accordance with its potential, and fails if it grows at a lower rate. By recalculating GDP growth rates (1948 to 1990) to account for the productive capacity of the gold sector, rather than total ounces produced, the figures were compared to the growth rates of 20 countries displaying similar attributes to South Africa. Total Factor Productivity, or the efficiency of the economy, was also assessed. His findings are summarised below:

*Economic growth after 1948 was only fractionally faster than before, despite highly favourable external economic conditions. South Africa's comparative output-growth record is poor, and its record in terms of the growth of manufactured exports and total factor productivity verges on the disastrous. Any one of these indicators would not be decisive, but taken together, they make a powerful case. It is tempting to conclude in fact, that rather than moving into a slump or crisis in the 1980s, as is often argued, the South African economy has suffered from a prolonged economic slump since the 1940s - a fact concealed until the 1970s by its incredibly favourable resource position... it seems the apartheid economy did in fact fail.*

Moll (1991, pp.289–290)

Identifying reasons as to why this occurred, Moll considers the liberal-radical debate and accepts that apartheid labour policies benefited from inefficient low-productivity sectors and firms reliant on cheap labour, at the expense of high productivity firms not reliant on cheap labour. However, economic growth is not exclusively determined by labour issues. All state policies link to and influence economic growth, and not all decisions which contributed to the country’s economic failure were linked to apartheid. A stark warning is given to economic policy makers in the 1990s: “poor state economic and social policies over the next decade or two could both perpetuate poverty and slow growth and reduce the chances of South Africa catching up towards the developed countries in the foreseeable future”.

Similarly, Natrass (1993) analysed the empirical relationship between wages and profit between 1939 and 1960 to determine the extent to which the radicalist assertion held: Namely that the apartheid labour system drove down the wage bill, allowing profits to rise. The radicalists conceded that although white wage growth was a problem for capitalists, the downward pressure on African wages more than compensated for the upward pressure on white wages. The research analysed the trend in wages and the share in profits, with the findings summarised in Table 6-6.

Table 6-6: Analysis of Wages (1939 - 1960)

Period	Finding	Finding
1939-1946	Profit share decreased	Many white workers joined the war effort and African labour was able to gain on white wages at the expense of profit share
1948-1955	Profit share increased	Decline in African wages compensated for the increase in white wages, however government policies (price controls, skills shortages and imports) affected profitability and the rate of profitability declined in the manufacturing sector
1955-1960	Profit share declined	Both white and African wages increased sufficiently to erode the rate of profit. The profitability in the capitalist sector was negative.

*Source: Adapted from Natrass (1993)*

## 6.5.2 The Development of the National Electricity Supply Industry under the 'Nats'

Described by Marquard (2006, p.151) as *"Escom moves to centre stage"*, this period consists of four distinct phases. The first sees Escom consolidate its position. Market dominance then allows Escom to dictate terms and take control of national generation and transmission; but external and internal instability negatively affect Escom's standing and the utility goes into decline. The fourth, and final period witnesses the restoration of Escom.

### Phase I: Market Domination and Consolidation (1948-1957)

1948 brought profound change. It started with the National Party narrowly winning the national elections against a by now ageing and uninspiring Jan Smuts. Barely two months later, Bernard Price, chairman of VFTPC, who was instrumental in the success of the company and fiercely resisted its expropriation, died. Hendrik van der Bijl, the man who delivered cheap electrical power and cheap steel died in December of the same year (Conradie & Messerschmidt 2000, 106–107).

The mining sector was expanding rapidly with the discovery of new gold fields, as well as the global demand for uranium (found in the gold ore structures) and new technology which allowed deeper mining. The manufacturing and industrial sectors were also growing, which meant large quantities of power were needed, and Escom responded. During the period 1952–1959, eight new power stations went into commission and additional capacity was added to six existing stations. The company designed and built four of the new stations, made possible by ex-VFTPC's staff. Escom's total generating capacity grew from 1 217MW (1945) to 2 052 MW (1954) and 3 297 MW (1959) – a growth of 170% in 14 years. Supplying the mines with cheap and reliable power was the utility's number one priority, a key reason why industry supported the expropriation of the VFTPC, as the latter operated on a non-profit basis. The mining industry was able to influence Escom's investment decisions - a practise which continued until the 1980s - achieved through frequent high-level meetings to discuss the industry's needs. Escom could not build fast enough and demand often outstripped supply, resulting in power outages. These were managed by emergency rules, supply agreements with the mines and mutual standby assistance pacts with generation



plants owned and operated by the municipalities. Municipal power during this decade was valued by Escom and there was a good working relationship between the two, evidenced by the fact that Escom did not object to any municipal building applications for power stations referred to it by the Provincial Administrator, notably Johannesburg's Orlando (pre 1948) and Kelvin A and B (post 1948) power stations (Eskom Heritage n.d.) (Marquard 2006, 152–154) (Conradie & Messerschmidt 2000, 105–119) (Steyn 2001, 70–73) (Christie 1984, p.155).

By 1949, ten plants were being built and five upgraded; sites, water and coal had to be secured with new transmission and distribution networks – all in remote areas. Securing local capital, which was needed for other essential projects, grew too great, and Escom looked towards accessing international loans, but subject to government guarantees. The Escom Loan Agreement Act passed in 1951 provided this security. Government-backed security was strengthened even further in 1958 when a provision to the Loan Act allowed the Minister of Finance to guarantee Escom loans and give creditors the comfort of a “*first charge on all revenues and assets of Escom.*” International loans in excess of US\$50 million were quickly secured, providing much needed relief to local capital markets (Conradie & Messerschmidt 2000, p.112)

### Phase II: Eskom Takes Control (1957-1972)

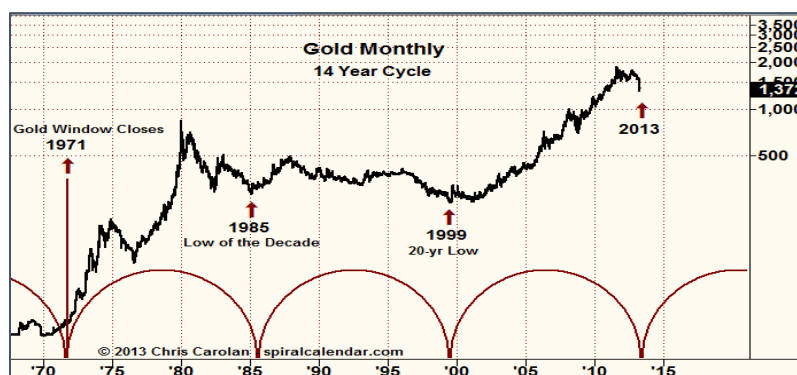
Escom's build programme continued unabated and generation moved to the Eastern Transvaal where large coal fields had been identified. The tried and tested 30 and 60 MW generation for plants exceeding 1 000 MW gave way to 100, 125 and then 200 MW units. Escom's concerns about water availability saw the introduction of the more expensive and less efficient dry cooling technology, which used 8 million litres less water per day per 200 MW unit, and its ability to adapt plants to local conditions brought international acclaim. The late 1950s started poorly for Escom, demand dropped significantly as many mines became uneconomical, but the decision to continue with the build programme was vindicated, for two reasons: The first, was the announcement that technology advancements now allowed for gold ores at depths of over 1 500 metres to be mined. The second, was the sale of bulk electricity to municipalities. From 565 million units to 47 municipalities per year in 1945, sales increased fourfold to 2 051 million units in just ten years. Over a decade (1961 – 1970), Escom's electricity sales increased by 105%. An important development during this period was Escom's effort to build a nationally inter-connected system. The operational dynamics of long-distance line losses, system stability and the different generating costs, needed to be reconsidered. With coal costing R7 a ton in the Cape and just R2 per ton in the Eastern Transvaal, transmission won the day and large power stations, which supplied the entire country, were built as close as possible to where the coal was mined. The national grid was completed in 1972 (Conradie & Messerschmidt 2000, 113–143).

International capital became increasingly scarce and expensive from 1970 as condemnation of apartheid grew, compounded by the 1973 oil crisis. Parliament responded by allowing Escom to create a Capital Development Fund (CDF), allowing it to deposit up to 3% of the value of outstanding debt from annual revenue, a move supported by Treasury as it relieved pressure from the capital markets. The money was invested in Escom stocks, and the way in which it was handled effectively, meant that consumers paid the contribution to the CDF, as well as the interest on the contribution (Horwitz 1994, p.10) (Conradie & Messerschmidt 2000, p.142) (Marquard 2006, p.156).

Escom, unlike other government-owned enterprises, enjoyed significant autonomy; not required to report directly to any national ministry. The only requirement, as was the case with all parastatals, was to keep its tariffs low for the sake of economic expansion (Horwitz 1994, p.11). The culture of continuous expansion, which created economies of scale, had been shown to be the most effective way to reduce the price of electricity. Markets were needed for the ever-increasing supply coming on-line, and Escom turned its attention to municipalities, where demand was growing. By its own reckoning, Escom was the designated national generator of electricity and it was no longer prepared to support or abstain from objecting against new municipal generation applications submitted to Provincial Administrators. The 1960s were when the “right of supply” battle (Chapter 7) was fought between Escom and the large municipalities, who owned and operated their own generation plants. Escom, with the tacit support of national government, won. Henceforth, municipalities would retain their distribution rights but would no longer be permitted to build any new generation plants. This arrangement remains in place in 2017.

### Phase III: Escom’s Golden Years quickly turn to Crisis Years (1973-1985)

The early 1970s was when Eskom’s core technology model came of age – the national grid was completed; mine mouth power plants became the standard approach, allowing for construction of ever larger plants, further reducing generation costs; and, most importantly, the centralisation of national planning of electricity expansion. These significant achievements led to hubris. Continuous expansion, already a mantra, was further entrenched and its growth rate of 9%, a doubling of capacity every eight years, was maintained – 10 000 MW were to be added between 1971 and 1980. The downturn in the global, and more specifically, the local economic and political climate from 1973, did not deter Escom’s build plans. Econometric models used to forecast future demand provided wildly different results and it was decided to rely on experience and build at a rate of 7-8%. The base was no longer small, and achieving this target meant bigger and more complex plants, rendering the recently installed 350 MW plants too small. Escom didn’t flinch and went to work. After all, it had successfully overcome its engineering challenges up until then. But the successes of the past were not easily replicated and the power stations being built were plagued with technical problems and accidents, resulting in additional costs (funded by increased tariffs) and delays (resulting in shortages and blackouts). Indeed, the decision to continue building at Escom’s historic growth rate, was based on a policy to become energy independent and still on growing a highly energy intensive mining sector (Eberhard 2015, p.2).



Source: Spiral Calendar<sup>52</sup>

Figure 6-4: Price of Gold in US\$ per ounce (1970 -2013)

<sup>52</sup> <http://spiralcalendar.com/wp-content/uploads/2013/04/041613goldc.gif>

Low electricity prices, to stimulate economic growth, could no longer be sustained, and tariffs started increasing steeply from 1975, by up to 30% and 45% in nominal terms per annum (Steyn 2003, p.1). By 1977, electricity cost 166% more in nominal terms than it did in 1971. The uncertainty of external financing following from the 1976 Soweto riots, at a time when capital expenditure had to be maintained, led Escom to substantially increase the contributions to the CDF. These went from 5.7% of gross income from electricity sales in 1973, to 29.7% in 1982; implying that almost a third of the tariff went towards funding future expansion (Conradie & Messerschmidt 2000, p.228) (De Villiers 1984, p.14). And whereas sales grew at 10.19% per annum between 1967 and 1974, the figure dropped to 7.83% in 1982 (De Villiers 1984, p.5). A feature of Escom's approach to tariffs was the absence of a fixed cycle or set date for increases. For example, tariffs would remain fixed for periods exceeding one year, followed by two increases in short succession (Table 6-7). This played havoc with municipal and end user-budgets; a source of contention, as explained in the next chapter.

Table 6-7: Escom Tariff versus Consumer Price Index (1973 - 1985)

Month & Year of Increase	CPI Increase (%)	Electricity Increase (%)	Months Since Previous Increase
April 1973	4.67	7.5	-
April 1974	9.82	1.1	12
January 1975	11.38	16.2	9
April 1976	14.60	15	16
September 1976	4.46	13	6
January 1977	3.05	25	4
January 1978	11.24	14.5	12
January 1979	11.70	4.1	12
July 1980	21.90	7.3	18
January 1981	7.42	5.5	6
January 1982	14.18	13.1	12
July 1982	7.64	6.6	6
January 1983	6.21	14.5	6
January 1984	10.31	6	12
January 1985	13.89	10	12
September 1985	11.75	10	9
January 1986	8.13	10	4

Source: Baasch (n.d.)

With South Africa's political and economic fortunes in decline, large electricity tariff increases became untenable and national government was forced to take action. Escom's practises were the subject of two commissions of inquiry. The first was in 1977 when the Minister of Economic Affairs asked the Board of Trade and Industries (BTI) to investigate the *"suitability of the tariff policy and structure applicable to the supply of electricity in South Africa"* from Escom and municipalities on economic growth. The Inquiry found that both were under-regulated and the ECB lacked sufficient capacity. The ECB was enlarged and its budget increased, while the board raised grave concerns regarding Escom's archaic accounting methods, lack of budgeting and management control, and the excessive use of the CDF. Turning to municipalities, the level of profits on electricity tariffs (used for the relief of rates), was noted. Subsequently, the ECB started an informal process of reviewing municipal electricity tariff increases to assess the level of profits, with the objective of limiting these to 10%. The ECB had no jurisdiction over municipalities however, and the best it could do was report its findings to the Provincial Administrator, who could exert influence over

municipal tariff policies (Conradie & Messerschmidt 2000, p.229; Marquard 2006). Steyn's (2001, pp.80–94) analysis concluded that Escom was able to undermine the BTI findings as the inquiry had misinterpreted its accounting practises. Escom responded to the high tariff increases, not by reducing the contributions to the CDF – but by running at a loss, which was carried forward to be recovered in future years. This tactic only bought time, and in 1980 high tariff increases were resumed (Table 6-7). Between 1979 and 1982, the bull-run on gold and the uncharacteristically cold winters increased demand, and Escom had to resort to planned and unplanned power outages. Escom's response was that more capacity was needed and developed plans to treble its capacity to 70 000 MW at a cost of R65 billion (Steyn 2001, p.79). The plans were announced in 1983, but by then the bull-run had ended and demand had normalised. A meeting between State President PW Botha and Escom's chairman, the seriousness of which was misunderstood by the latter, led to government capping the announced tariff increase to 14.5% and the announcement of the second inquiry to investigate the supply of electricity, under Dr De Villiers (after whom the report came to be known). The inquiry would address concerns regarding increasing electricity tariffs and amounts of capital required for the provision of electricity. The inquiry however concentrated solely on Escom, did not consider municipalities and proposed a structure which bypassed the existing ECB (Marquard 2006, p.133); with the report accepted *in toto* by Cabinet on 20 November 1984. The inquiry identified seven far reaching recommendations to reform the ESI - effectively Escom. The recommendations (De Villiers 1984) and their implications are summarised below:

1. **New Management Structure:** Henceforth a two-tier structure of a board of control and a management board. Additionally, an electricity council was formed (financed by a levy on the electricity tariff) to formulate policy, strategic planning and high-level control. The management board would be accountable to the council and manage the operational affairs of Escom;
2. **Maximum Utilization of Resources:** Tariffs could not rise too rapidly and the conservation of electricity had to be promoted, so as to stall new generation plants and benefit the economy;
3. **Improved Operational Performance:** The capital cost/MW had to be reduced, such as standardising operations, water conservation and anti-pollution standards, and sourcing local products;
4. **Load Forecasting:** Escom's econometric modelling, developed in 1973, was no longer relevant and henceforth government and interest groups would participate in energy planning<sup>53</sup>;
5. **Accounting Practises:** Operating "*neither at a profit or a loss*" was no longer appropriate and was to be replaced with sound accounting principles;<sup>54</sup>;
6. **Amendment of the Act:** For the recommendations to take effect, Electricity Act 40 was amended.

Escom's reputation suffered further in 1984, when a senior official defrauded the company of R8 million (US\$3.6 million, equivalent to over \$10 million in 2018), the biggest single act of fraud in the country's history.

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<sup>53</sup> The inquiry was particularly scathing about Escom's planning process, continuing to base its build programme on a load growth of 7% even when its internal studies found it was too high (Steyn 2001, p.84). The report believed that 5% was a more accurate reflection. Both were overly optimistic and never materialised; growing at an average of 4% between 1982 and 1991<sup>53</sup> (Marquard 2006; Conradie & Messerschmidt 2000) (Horwitz 1994, p.13)

<sup>54</sup> With income cover of at least 1.05 and an asset / liability ratio of 3:2. Its debt management driven tariff policy was viewed as "*the worst of both worlds – bad principles and bad practice*" by Kantor (1988) and dismissed as unworkable by the Eskom financial team a few years later (Steyn 2001, p.115)

#### Phase IV: Regeneration (1985-1994)

P W Botha summoned Johan Maree in 1985, selecting him because of his vast financial and business acumen in both private and public enterprises (rather than opting for engineering expertise). Appealing to his sense of national duty, Maree was persuaded to take the post of chairman of the newly formed electricity council. Maree, with Eskom veteran Dr Ian McRae, who at the same time became the chief executive, were tasked with reviving the utility.

The two executives were supported in 1987 by two new pieces of legislation, the Eskom Act 40/1987 and Electricity Act 41/1987. These, *inter alia*, created: a new name, “Eskom” (a combination of the English Eskom and Afrikaans Evkom); highlighted Eskom’s function to supply its consumers with electricity in the most cost-effective manner; eliminated the CDF and Reserve Funds; allowed Eskom to set tariffs, subject only to an appeals process; and confirmed it could now operate at a profit, but was not obliged to pay taxes. Eskom became accountable to the Minister of Public Enterprise, who happened to also control energy at the time, but only until 1990 when the two were separated. The ministry’s objective was to privatise state owned enterprises; but with the fall of P W Botha (who supported the international trend of privatising state assets) and the start of secret negotiations with the ANC, this initiative was dropped.

Changes were immediate – new management and accounting practises, and scaling back on investments to increase capital holdings. The utility transformed from an engineering-dominated management culture to a more balanced and commercially oriented one. Between 1986 and 1989 over R2 billion was eliminated from its budgets and the workforce reduced from 66 000 to 40 000 by 1993. Given the political turmoil engulfing South Africa, the combination of cost savings and improved management could not have come soon enough and eased the tension between national government and the private sector. The above achievements were important and allowed the new management team to achieve its over-arching objective and now infamous quote of “*keeping government out of the engine room*”. Politicians were appeased by favourable comparisons when benchmarked against international utilities, and entering into a price compact in 1991, which allowed an initial 9% increase, followed by a cumulative 20% reduction over the next five years (Marquard 2006, p.172) (Conradie & Messerschmidt 2000, p.254) (Steyn 2001, p.110).

In a more balanced assessment, Steyn (2001, chap.5) agrees that the reforms visibly improved governance at Eskom. However, the long-standing practise of over-investing in power plants was not stopped, just delayed; and although the other cost cutting and governance measures helped, it was ultimately the time delay that improved Eskom’s financial state. Tariff increases coincided with the rate of annual capital expenditure reducing by 50% after 1985 and precipitated a virtuous cycle of financial recovery. The contracts for the construction of the new plants paid little attention to deferment clauses, which would have been difficult to execute, while the attractive financial terms were unlikely to be re-negotiated, given the political climate and international sanctions. Of the six power stations being planned prior to, or during the De Villiers commission, only one was cancelled (Lekwe) and only because government ultimately refused to permit further borrowing. In fact, Eskom proceeded twice with the 4 000 MW Majuba. Construction of the first three units commenced even though Eskom was acutely aware of the looming over-supply. Units 4-6 were suspended in 1992 but got the go-ahead in 1995 even though a decision to

close the colliery supplying the station due to previously undetected diagonal faults elicited strong internal opposition<sup>55</sup>.

Years of over-investment in generation plants finally overtook demand and Eskom's total sent out rating in 1991 was 36 228 MW against a peak demand of 22 342 MW. Even a generous reserve capacity of 20%, Eskom's stated figure at the time, implied an overcapacity of 8 100 MW, or 40%. The first half of the decade saw no growth in consumption, and for only the third time in Eskom's history demand declined by 0.4% in 1992; all while new stations were coming online. Thus, started a programme of decommissioning older and more expensive / less efficient plants; and by 1991 six plants with more than 5 000 MW of generation capacity were 'mothballed', which could still be operated economically if required. In 1997, notwithstanding its efforts to electrify black households, Eskom estimated that the surplus capacity could last up until 2010 (Horwitz 1994, p.13) (Steyn 2001, 113–122) (Conradie & Messerschmidt 2000, p.260). More needed to be done to soak up the excess supply, and a marketing department was established in the mid-1980s. A secondary function was to promote and repair the image of Eskom. Under intense pressure from national government to extend supply to farmers in outlying border areas, Agrelek was conceived in the 1980s. The high costs of extending supplies to remote areas could never be recouped and had to be subsidised by other users. Agrelek's success stemmed from its ability to persuade new users under the programme to switch to electricity for all their power requirements, such as crop spraying; drying; and irrigation pumping. Eskom used Agrelek as a blueprint and introduced Industrelek (Industry), ElektroWise (Households), ElektroServe (Service and Hospitality), and UtilitiMark (Bulk Resellers). Long term supply agreements were entered into with five municipalities, which displaced 940 MW of municipal generation, at discounted rates. This was under the guise of making the country more competitive through cheaper electricity costs. Industry was also offered discounted tariffs to increase their electricity consumption and capital expenditure. The cheaper tariffs would apply for as long as Eskom had surplus supply, expected to last in the region of ten years. Finally, Eskom entered into long term supply agreements with large energy intensive users in ferro-alloy and aluminium sectors, which would later come back to haunt Eskom<sup>56</sup>; most notably an aluminium smelter in Richards Bay in 1991 and a second one in Mozambique in 1997 (Conradie & Messerschmidt 2000, pp.285–287) (see Jaglin & DuBresson 2016).

Eskom did little to comply with the De Villiers requirement to implement energy conservation. Curiously, Conradie & Messerschmidt (2000, p.253) state:

*“Eskom had also started implementing the De Villiers Commission recommendation to help customers' conserve energy. Although this seemed in conflict with the newly emerging problem of surplus capacity, it was seen as an opportunity to increase the number of people with access to electricity without over-investment in new capacity.”*

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<sup>55</sup> In addition to the findings in Steyn's report, informal discussions with Eskom employees confirmed the strong internal opposition to proceed and that many felt it was McRae's legacy project and he would not be talked out of it. The three units created a tipping point, as any new construction was now so far into the future that skills could not be retained, and experienced and competent employees were leaving the firm in search of new opportunities

<sup>56</sup> The two smelters consuming as much as 5.5% of Eskom's total generation, became controversial when the country suffered blackouts and increases of over 300% in 5 years, but the smelters continued paying the tariffs agreed to in the 1990s. At the 2014 tariffs the smelters would be uneconomical. The cost to Eskom was estimated at R11.5 billion in 2014. Although there were initial benefits, the net effect has been a cost to the economy and only viable through what is effectively a state subsidy (Allix 1AD).

Given the lengths Eskom had gone to attract new clients, to convince new users and to provide incentives for users to switch to electricity regardless of efficiency implications<sup>57</sup>, this assessment at best is an outdated interpretation of energy conservation, and appears to only pay lip service to official policy.

### National Electrification Programme

Living conditions for black people were dire during this period, and a trip to a township by Ian McRae in the early 1980s as Head of Operations at Eskom, appalled and convinced him that such levels of poverty would constitute the greatest threat to a peaceful transition. Something had to be done. Thus followed multiple undercover and at the time illegal, meetings with the ANC (McRae 2006). In 1989, when McRae was chief executive of Eskom, he announced the utility's commitment to "electricity for all", which included a scheme to assist municipalities with the electrification of black townships. As political events started to unfold, and it was clear that the country was moving towards a political transition, Eskom declared a target of connecting one million homes over a period of five years. Eskom's decision to act in advance of political events was bold and there is no reason to question its sincerity<sup>58</sup>, as this strategy also aligned with Eskom's business interests for two reasons: Firstly, supplying a new untapped market during a period of massive over-supply would help reduce the ever-expanding reserve margin; and secondly, it was essential to forge strong relations and build trust with the government in waiting for Eskom to retain organizational autonomy (*"keep them out of the engine room"*). (Marquard 2006; Conradie & Messerschmidt 2000; Steyn 2001; McRae 2006; Bekker & Marquard 2008).

Electricity for all was easier said than done though. Eskom was a bulk supplier with limited distribution to rural / semi-rural<sup>59</sup> and farming communities. Additional supplementary issues included: regulation, which added costs; access to communities; vandalism and theft; post payment resulting in unaffordability and non-payment; cross-subsidisation; and political resistance. The results were mixed. On the positive side, aerial bundled conductors were approved which reduced installation costs dramatically; Readyboards<sup>60</sup> with pre-paid meters allowed users to better manage their budgets; and access to communities improved while political resistance lessened, as projects yielded results and trust was built. Conversely, scepticism remained, especially from provincial administrators who believed a precedent for free electricity was being set. Electricity bills were also bundled into municipal bills and became the target of rent boycotts. As early as 1988, Soweto was already R10 million in arrears. Eskom dared not cut supply to Soweto for fear of the political and international fallout (McRae 2006, 88–93). But the most contested area and ultimate Achilles heel, was Eskom's old foe, the municipalities. Having taken the initiative, Eskom was initially able to target highly populated urban areas, which had the greatest potential for low cost connections. As the electrification initiative gained acceptance and became an imperative, the process started to formalise. For example, the National Electrification Forum (NELF) was formed in 1993, at which Eskom came to an agreement with the ANC that it would electrify 2.5 million homes between 1994 and 1999 (Bekker & Marquard 2008, p.17). But with the municipalities now involved, Eskom started to find it increasingly difficult to access urban townships controlled by municipalities.

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<sup>57</sup> Interview with Anton Potgieter, employee at Eskom from 1985 -2002 and member of the Eskom marketing team

<sup>58</sup> A dedicated electrification division was established in the distribution division, with an electrification manager appointed in each of its divisions to ensure the achievement of targets (Steyn 2001, p.112)

<sup>59</sup> With the exception of Tygerberg (Cape Town), Sandton and Midrand (Transvaal) which started out as farms but had become urbanized over time

<sup>60</sup> A mini-distribution board equipped with circuit breakers, earth leakage protection and plug points

*“Having publicly committed itself to clear connection targets, Eskom, instead of undertaking the politically costly step of reducing its commitments and calling on the municipalities to commit to appropriately higher connection targets, increased its connections in rural areas, where it had access.”*  
Steyn (2001, p.113)

Rural areas had lower densities, higher poverty rates and consequently much lower consumption levels, so the benefit of increased connection according to Davis, the former Eskom Director of Finance, was questionable and the public funds could possibly have been used in a manner that provided greater benefit (Steyn 2001, p.113).

### 6.5.3 A Historical Institutional Perspective

#### Political and Economic Overview

South Africa’s economic and industrialization policy of import substitution, in many ways replicated the approach used by the agricultural sector: low productivity and low efficiency, counterbalanced by low wages. Indeed, with the added support of cheap electricity tariffs and an abundant supply, the application of this strategy to the mining sector, although not ideal, proved feasible. As a blueprint to develop sustainable secondary industries however, it was a bridge too far. The local market was too small to support meaningful manufacturing, and the combination of low productivity levels and the costs of reaching distant markets, meant most industries were uncompetitive and marginal. Here, rather than evaluate its industrialisation programme, to introduce the reform needed to improve quality and competitiveness, government opted to persist with its flawed approach by continually adding new layers of legislation and support. This was only possible because whenever it appeared that reform could no longer be avoided, the country’s mineral resources would once again deliver the foreign currency needed for the economy to survive - providing a lifeline to the existing system. Be it the discovery of massive gold fields in the Free State, international events which drove up the price of gold, the discovery of large deposits of other minerals, or geo-political events inflating commodity prices, it always meant that minerals remained the cornerstone of the economy. In truth, real reform would have interfered with the implementation of the apartheid project, which was the priority.

Thus, the period up to 1970 can be categorised as that of layering - of policy and regulation, *inter alia*, tariff protection, subsidies, tax rebates and price supports, together with the exploitation of black labour (through regular introduction of additional legislation to subvert them) and low electricity tariffs - constantly added to support local manufacturing. The second period (1970 – 1994) is best described as falling under the influence of drift and some layering: Drift, because in recognising the structural frailties of its industrialization programme - articulated in no uncertain terms by Reynders - government’s attempts to migrate to an outward looking economy bore little success. It was a case of “too little too late”, because by then global stagflation, international pressure to end apartheid and local unrest meant little would or could be achieved. Indeed if one is to accept that drift means, *“rules remain as they are, but external factors change and institutions do not respond to the changing social and economic environment”*, then the apartheid government’s actions indeed correlate; because in attempting to preserve apartheid, economic policy became even more protectionist and insular, to the extent that growth was sacrificed to retain a surplus on the current account, with high duties levied on imported



goods and interest rates increased to reduce aggregates. This thus points to a classic case of the layering process - made up of compounding measures.

### Electricity Supply Industry

1948 was a watershed year for two of the protagonists of this research, Escom and national government. Here, the latter was tasked through an electoral mandate to deepen segregation, while the former - having expropriated the VFTPC - had the daunting task of creating a new ESI landscape to satisfy the unquenchable demand for cheap energy. And whereas the NP's political fortunes during their uninterrupted rule until 1994, was a tale of two halves, it was less straightforward for Escom, which had four distinct periods, as has been detailed above. Indeed, the utility experienced significant change, both incremental and punctuated, during this 46-year period – thus providing rich material for historical institutionalist analysis.

From 1948, Escom's competencies and abilities were immediately called upon to meet the ever-increasing demand for electricity, the complexity of absorbing VFTPC and building new power stations. Indeed, Escom was often not able to meet demand, forcing it into planned supply scheduling and unplanned blackouts, which were partly mitigated by entering into long-term supply agreements with the Johannesburg MEU. This can be seen in the City's 1952 Annual Electricity Report (Table 6-8).

Table 6-8: Johannesburg MEU's Eskom Electricity Sales and Purchases (1948 – 1952)

Year	Units Purchased (from Escom)	Units Sold (to Escom)
1948		7 739 256
1949		55 680 406
1950	230 244	89 299 330
1951	323 464	99 147 827
1952	82 885	169 899 354

These figures demonstrate the extent to which Escom relied on the Johannesburg MEU and how this lucrative revenue stream benefited the municipality, creating a mutually beneficial working relationship. The supply shortages also sent strong economic signals to both parties to expand their generation, which were pursued. However, the playing fields were not equal. Municipal applications for new power plants required the provincial administrator's approval and could be referred to Escom, who could influence the outcome. Escom applications, however, were not subject to such oversight or veto conditions. Between 1948 to 1957 Johannesburg submitted three applications which were approved, suggesting that these were evaluated on their merit; and notwithstanding Escom's right to object, were independent. During this period of high and growing demand for electricity (1948 to 1957), Eskom and the MEU's were investing heavily in new generation plants (positive feedback loop of continuous expansion). The severity of national shortages also necessitated cooperation between Escom, the MEU's and national government, as witnessed by the approval of Johannesburg's and other MEU's power plant applications.

Between 1957 and 1962 however, the commissioning of Escom's new power stations coincided with a slowdown in both the economy and electricity demand. Escom decided to continue with its aggressive construction programme regardless, but realised that demand from the mines could not continue to grow indefinitely. New markets were needed, and it was at this time that Escom started eyeing municipal supply. Escom now saw itself as the country's primary (sole) generator of electricity, which it would

transmit throughout the country on completion of the national network and centralised planning of its operations; targeted for 1970 and achieved in that year. As it turns out, the economic slowdown was short lived, but this strategic shift in Escom soured the relationship between itself and the MEU's, especially Johannesburg which had its own ambitious expansion plans. Here Escom succeeded in having the Johannesburg's MEU application to build a new 1 000 MW plant rejected three times by the provincial administrator, which resulted in the next critical juncture – with these events explored in detail in the Johannesburg MEU case study (Chapter 7.4.2). Suffice to say here that the outcome was acrimonious and soured the relationship between the two for decades to come.

In the application of theory to this time period, historical tracing of the 1960s identifies several factors and points to possible observations regarding change. The first, is the presence of conversion (changed enactment of existing rules) with regards to the inconsistent approach adopted by the provincial administrator in the granting of municipal generation licences – particularly since the outcomes were heavily influenced, if not determined, by Escom. Secondly, there is also clear displacement (insurrectionaries replacing existing rules) in the instance when all MEU's agreed in 1968 to relinquish their rights under the 1910 Transvaal Power Act and to not to build new power stations, which remains the case in 2017. Thirdly, we witness the clear amplification of Escom's positive feedback loop of continuous build, whose key objective of taking complete control of the country's electricity generation was ultimately achieved. In this regard Escom received the tacit support of national government via the provincial administrator's decisions and the recommendations of the Borckenhagen report (Chapter 7.4). Fourthly, in the area of electricity generation, during this period we see MEU's being forced to shift from a positive to a negative feedback loop, until their existing power plants were shut down due to age and MEU's were eliminated completely from the sphere of generation. No longer able to generate, municipalities turned their full attention to their distribution business; required to make up revenues lost from generation. Finally, Escom's continuous build mind-set became so entrenched that the practise itself became path dependent, whereby overly optimistic growth projections were defended regardless of evidence to the contrary.

For Escom in the period that followed, the 1970s brought early successes (detailed in Phase III); but they were soon overshadowed (somewhat) by the next downturn in the global and local economy. Not to be deterred, Escom continued on its well-established path of maintaining its unrealistically high demand growth forecasts of 7% per annum, regardless of clear economic and political realities. Ultimately this could not be sustained, especially with its external (foreign loans) and internal (national government, private sector and reduced sales) funding increasingly drying up as the decade progressed. The only option was to increase tariffs – frequently and excessively; to the ire of the public, business and national government – thus resulting in the appointment of three commissions of inquiry into the effect of the tariff increases. In all of this, Escom somehow always seemed to find a way to obfuscate the deeper truths of situations through the mechanism of conversion, where *“Rules remain the same, but are interpreted and enacted in new ways under changing external conditions, to serve new ends”*. For example, Escom's original mandate to operate at *neither a profit nor a loss* resulted in the creation of the perverse incentive of encouraging capital expenditure to nullify profits; fully exploited in purloining profits that would otherwise have to be returned in the form of lower tariffs. This practise also had the added benefit of masking operational inefficiencies. Eventually, the last of the inquiries into Escom, the De Villiers commission (1984), proposed tough reforms which national government adopted through the promulgation of two new regulations – Acts 40 and 41 of 1987. The utility, whose name was changed to

Eskom, was now accountable to its shareholder - national government - and at face value the new regulations bear all the characteristics of displacement “*The removal of existing rules and the introduction of new ones*”. Henceforth, Eskom had to operate as a company, comply with generally accepted accounting standards, improve efficiencies, reduce its workforce numbers, and operate on a profit motive. Which it did, but not to the extent envisaged or required, as Steyn (2001) observed. Of course, some medicine was taken, such as reducing its work force; but its ability to play a smart strategic game allowed it to continue its well-trodden path of continuous expansion - managing to build five of the six power plants planned, with the final one commissioned in 1995 – thus persisting with a positive feedback loop.

The next section now traces the consequences of such an extraordinarily long period that was dominated by the positive feedback loop of continually building new power plants – an (inevitable) overcorrection.

## 6.6 Democracy – At Last! (1994 – 2015)

### 6.6.1 Economic Development

Having won the country’s first democratic elections with an outright majority, and now in full control, albeit within a government of national unity at the start, (April 1994 to February 1997), the ANC was able to completely transform existing economic policies. We now look at how the political economy has developed, and fared, under the ANC government.

By 1994 the South African economy had been ravaged by the NP’s futile attempts to protect apartheid. Massive amounts had been spent on defence and on creating and supporting mostly uncompetitive “sanction-busting” industries. These covert activities led to endemic corruption and were topped by reckless spending and personal enrichment during apartheid’s final death throes between 1990 – 94, particularly by inflated contributions to civil servants’ pension funds (Williams & Taylor 2000, p.27). The ANC inherited an economy in crisis: GDP had shrunk for three consecutive years (1991-1993); GDP per capita and investment rates were declining; there was a negative balance on the financial account for nine consecutive years; the budget deficit was 9.5% of GDP and public sector debt was 64% of GDP. There was little room for additional spending (Roberts 2006, p.1).

On his release from prison (February 1990) Nelson Mandela stated: “*The nationalisation of mines, banks and monopoly industry is the policy of the ANC and a change or modification of our views in this regard is inconceivable*”<sup>61</sup>. But by 1994, the ANC had adopted a neo-liberal economic policy whose primary objectives were to lower and manage inflation, reduce the budget deficit and support trade liberalization. How did ANC policy shift from left-leaning wholesale nationalisation to orthodox macroeconomic policy in just four years?

### Deciding on a Developmental Ideology: The Reconstruction and Development Programme

In 1989 the ANC had no formulated political and economic policy. The latter relied heavily on the principles of the 1955 Freedom Charter; more about redistributive slogans rather than any coherent plan aligned with any specific economic ideology. Its vagueness allowed the ANC to formulate alliances with various interest groups. The ANC realised that it needed to develop a detailed economic policy to respond

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<sup>61</sup> Quoted in the Sowetan Newspaper, 5 March 1990 (Nattrass 1994b, p.344)

to concerns of, and pressure by: the ruling NP with which it was negotiating; the local (white) business community; and the international community, led by the World Bank and the International Monetary Fund, which espoused neo-liberal economics. Economic policy development commenced with the draft ANC Economic Manifesto (not adopted), conceived at the Harare conference, April - May 1990, and the ANC's "Ready to Govern" document of May 1992. However, the rhetoric remained vague and called on the need for "reconstruction" and "redistribution". These terms were not defined and the reader could infer "*anything from extensive state intervention to conventional market driven structural adjustment*" (Nattrass 1994b, p.346). Although nationalisation remained firmly on the agenda, references to South Korea were interpreted as a softening of traditional Marxist economics towards state intervention. A tussle ensued amongst the members of the so-called tripartite alliance, made up of the ANC, the South African Communist Party (SACP) and the Congress of the South African Trade Unions (COSATU). Grassroots activists in each organisation continued to advocate radical economic policy of nationalisation, curbing the power of large national business and limiting the extent of foreign investors' influence. Work commissioned to develop economic policy between 1991 and 1993, included the Macro-Economic Research Group (MERG) and the industrial Strategy Project (ISP). MERG provided an alternative approach to neo-liberal economics and aimed to demonstrate that organizational, technical and infrastructural capacity existed. The creation and development of manufacturing exports was its vehicle for economic growth. Having agreed to rule in a government of national unity for three years under the interim constitution, the ANC was very aware that the NP in its final years of rule had come to represent big business interests. Coupled with direct pressure and courting from local business itself and the international community, the ANC settled on the investor-friendly neo-liberal leaning Reconstruction and Development Programme (RDP) as its official economic policy going into the 1994 elections. The RDP contained many of the ideas, targets and forecasts of the MERG, but fell short in the view of trade unionists. (Williams & Taylor 2000; Habib & Padayachee 2000; Nattrass 1994b; Carmody 2002; Nattrass 1994a)

Successful implementation of the RDP was of such importance, that the RDP office was placed within the Presidency and the South African Year Book (1995) stated that it was the most significant policy document since the 1955 Freedom Charter (Masilela & Mthiyane 2014, p.63). The RDP's central tenet was that the redistribution of income would result in increased demand and thus higher economic growth, which in turn would redress economic imbalances. The RDP consisted of five interlinked policy programmes. At its core, and its first priority, the RDP targeted building one million houses, providing basic services of water and sanitation to all, electrifying 2.5 million homes, and providing health services, transport and other basic services (ANC RDP 1994, sec.1.4). As with previous ANC policy, the text in the RDP was vague and broad (Williams & Taylor 2000). This was quickly seized upon by various interest groups, and as Dexter (1995) of the SACP noted "*the RDP had become all things to all people*". This was due to the multitude of revisions to satisfy all the negotiating parties at the time (Nattrass 1994b; Adelzadeh & Padayachee 1994). The idea of a super-ministry was quickly disbanded when bureaucrats of the NP and ANC objected to their plans having to be submitted to an office that could veto their programmes, if they did not align sufficiently with the RDP (Masilela & Mthiyane 2014, p.63). The RDP's failure to provide specific guidelines and timetables resulted in uncoordinated policy implementation, even though the RDP itself called for a coordinated approach (Adelzadeh & Padayachee 1994, p.16) (Gelb 2007, p.20). Nattrass' (1994b, p.359) assertion at the time that many of the demands made by the RDP were impractical and unaffordable, proved to be accurate, and the RDP signalled the ANC's acceptance and commitment to a neo-liberal

approach to macroeconomics (Williams & Taylor 2000; Habib & Padayachee 2000; Weeks 1999; Carmody 2002; Seekings & Nattrass 2002; Adelzadeh & Padayachee 1994; Gelb 2006). Many academics warned against the inappropriateness of following a World Bank and IMF neo-liberal approach, with Adelzadeh & Padayachee (1994) most notably among these:

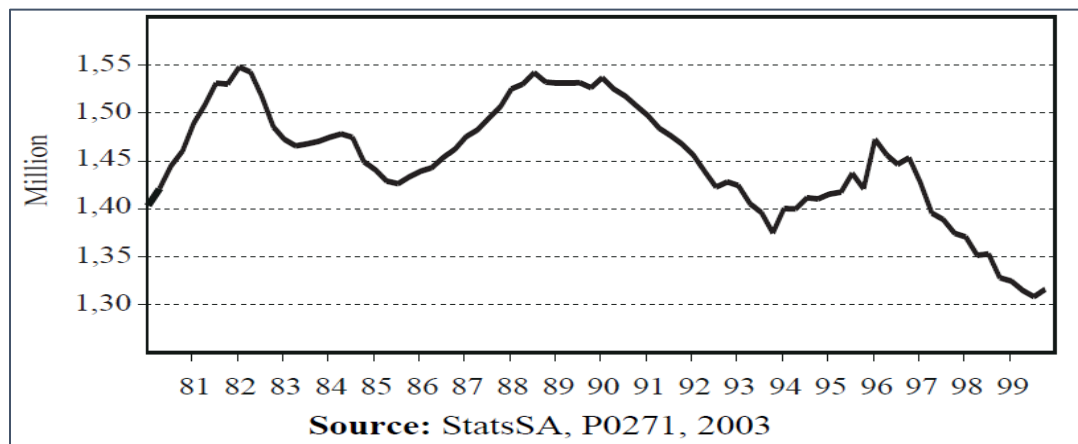
*“Any serious and honest analysis of South Africa’s history, its stage of development and of current local and global conditions would suggest that a strategy of development based on an essentially neo-liberal, free-market ideology, or the magic formula of privatisation, liberalisation and convertibility will be singularly inappropriate”.*

One shining light of the RDP programme is the national electrification programme. South Africa’s first census covering the entire population was undertaken in 1996 and found that 97% of white households had electricity, while only 25% non-white households were electrified. A 1990 estimate put the figure at less than 30%, but by 2000 the electrification figure was over 60% (Bekker & Marquard 2008). Universal electrification was targeted for 2014 and although this was not achieved, the 2011 national census reported that 93.2% of households used electricity for lighting.

#### From RDP to GEAR to ASGISA

By 1995 there was widespread disappointment with the impact that the RDP was having. While considering appropriate measures on how to stimulate the economy, either through fiscal expansion or a currency devaluation, international markets obliged and the currency devalued by 18%, triggered by domestic political uncertainty (Gelb 2007, pp.20–24). In 1996 the South African government then introduced its new macro-economic policy, the Growth Employment and Redistribution (GEAR) framework, which would increase annual growth by an average of 4.2%, create 1.35 million jobs by 2000, increase exports by 8.4% and significantly improve social structures. The policy was heavily criticised for being developed by a small team of technical experts who did not consult or share their economic models. By committing to conservative fiscal policies, trade liberalisation and moving from consumption to investment spending, the policy aligned with international consensus of ‘sound economic policy’ and confirmed South Africa’s commitment to a neo-liberal path to development (Williams & Taylor 2000, p.33). Under GEAR, Carmody (2002, pp.258–259) found the government’s approach to globalisation to be contradictory. On the one hand, a much tighter fiscal policy than that proposed in GEAR was pursued and tariff reductions exceeded those required by the World Trade Organization (WTO). Yet on the other, the Labour Relations Act introduced stricter market regulation. The combination of losing long held tariff protection with higher labour costs, at a time when India and China entered the global trading system on a large scale, highlighted just how uncompetitive and unsuccessful South African industry was at exporting goods – an industry enabled by gold mining (Freund 2010) *“which grew behind tariff barriers and languished there”* (Nattrass 1994a, p.520). Trade liberalisation it was believed would make the country more competitive in the global market place; creating the jobs that mining would inevitably shed (Habib & Padayachee 2000, pp.249 – 252). And indeed, some successes could be attributed to trade liberalisation: A 0.7% of GDP investment in research and development led to evidence of innovation amongst firms, with many operating according to best practise. Additionally, non-commodity-based energy intensive manufactured export, benefited from the country’s low electricity tariffs. This competitive advantage allowed the production of the aluminium cluster of alloy wheels, catalytic converters and tanks to grow strongly (Carmody 2002, p.268). However, GEAR did not even come close to meeting its objectives. Plans to rapidly privatise state owned enterprises stalled as investors did not step forward and trade unions opposed their sale. For example, the Energy White Paper (1998) called for

private investment in generation, and the sale of parts of Eskom, in order to liberalise the market (Energy White Paper 1998a). Reform appeared possible in 2000, but government's offer was too unattractive for investors, and continuous resistance from organised labour resulted in the opportunity being lost (Eberhard 2005b, p.5317), forcing government to stand as guarantor for a > 10 GW new build programme. GEAR's targeted average GDP growth rate of 4.2% (1996 – 2000) averaged 2.8%<sup>62</sup>, despite an acceptable inflation rate of 7.9%. On GEAR's failure, Weeks (1999) concluded that fiscal contraction and high real interest rates were the cause. Carmody (2002, p.256) research found that by 2002, more than half a million jobs had been lost, in contrast to the 600 000 to be created. The growth that did take place in the manufacturing sector during the 1990s did not add to employment and this actually fell, in a process of jobless growth (McCarthy 2003, p.174), as can be seen in Figure 6-5. Hodge (2009) however, argues convincingly, that the main reason for the persistently high and rising rates of unemployment during the 1990s, was the large increase in the labour force and not declining employment, which in fact grew steadily, especially after 2000. Regardless, the fact remains that total unemployment went up and not down during this period.



Source: McCarthy (2003)

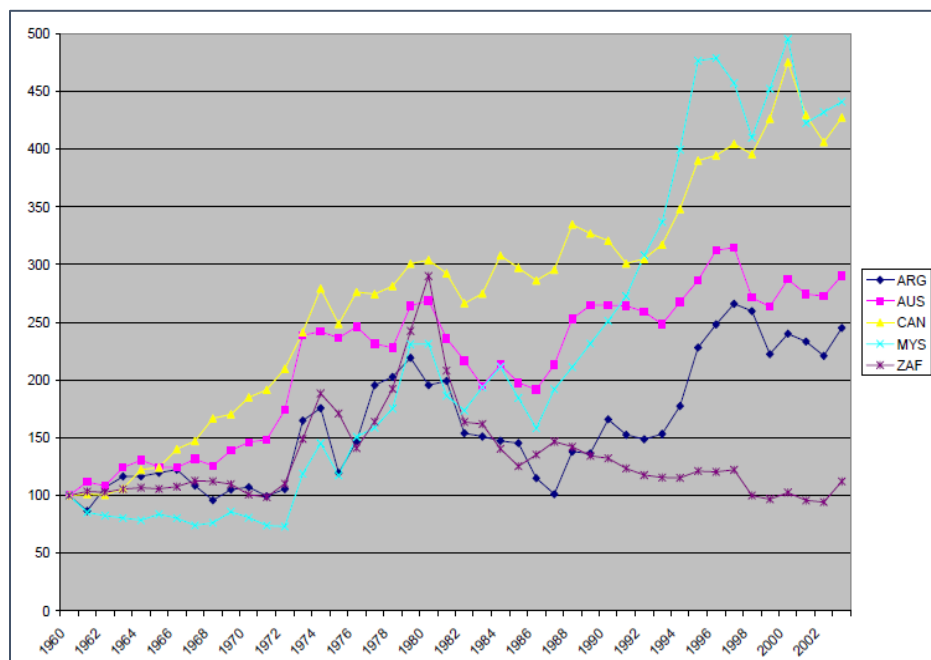
Figure 6-5: Total employment in the Manufacturing Sector (1990s)

In 2003, President Mbeki stated that inequality and poverty persisted and that there were two economies. A “staircase” needed to be built between the first and third world economies that existed in the country. The Accelerated Shared and Growth Initiative for South Africa (ASGISA) would link the two. When launched in 2006, the ASGISA policy framework set a GDP growth target of 6%, which would halve the population living in poverty by 2014. This would be achieved by infrastructure projects amounting to 5% of GDP per annum for five years, with a matching focus on skills development and education. Additional employment would be created by targeting the tourism and business outsourcing sectors; both labour intensive export sectors with opportunities for small and medium sized businesses. ASGISA was supported by the Expanded Public Works Programme and the first five-year Industrial Policy Action Plan (IPAP). ASGISA however came under immediate scrutiny for offering little that was new, being overly optimistic, failing to create consistency amongst ministries and having inadequate financial resources (Gelb 2007; Bell 2006; Davies & Van Seventer 2006; Frankel & Sturzenegger 2007; Hausmann 2008; Nattrass 2008).

<sup>62</sup> World Bank Country Statistics

Ultimately, ASGISA never got off the ground, as President Mbeki was replaced in 2008 by President Motlanthe and then President Zuma in 2009.

Shortly after ASGISA was launched, the South African government requested the International Panel on Growth, referred to as the Harvard Group, to evaluate and advise it on the economy (Hausmann & Klinger 2008). Using its diagnostics approach, the Group evaluated the state of exports and found them to be grim. GDP per capita in 2004 was only 40% higher than it was in 1960 and exports per capita for the same period were only marginally higher, with an annualised growth rate of only 0.64% per annum. South Africa's exports per capita performed poorly against other resource based economies – Canada, Malaysia, Australia and Argentina (Figure 6-6), which is a rather depressing finding if the evolution of the Argentinian economy detailed earlier, is considered. The poor performance of the economy was attributed to the inability of mining to keep up with population growth, and while there was some manufacturing expansion in the 60's and 70's, it has been largely stagnant since then (Fedderke 2001). Government was advised to: strengthen manufacturing industries whose outputs were likely to be internationally competitive; prioritise exchange rate targeting (as opposed to inflation targeting); address the skills shortage through immigration; continue with fiscal restraint; and introduce greater flexibility in the market, such as labour reform. The findings were largely rejected on the basis that the focus of the research was too narrow (selective) and a thinly veiled attempt to support and legitimise the incumbent government's existing and failing neo-liberal policies. The Harvard Group exercise amounted to little, particularly given the removal of President Mbeki from office during the final stages, which critics concede probably impacted on the Group's commitment to the veracity of the findings and recommendations (Nattrass 2008; Fine 2009).



Source: Hausmann and Klinger (2006)

Figure 6-6: Exports per Capita amongst Natural Resource Exporters

Despite political rhetoric and economic policies specifically developed to create jobs and reduce inequality, South Africa's economy did not create sufficient job opportunities and its true foreign exchange earnings continued to be highly reliant on mineral resources, especially due to the continued weakness of export-oriented manufacturing (Rodrik 2008); which although more sophisticated with new export products listed previously, lagged behind comparable countries (Nattrass 2008, p.11). Changes in sectoral outputs and trade from 1990 also led to a "skills twist", where new specialised jobs were created for highly skilled individuals, while unskilled and semi-skilled jobs, which were needed most, declined (Gelb 2007, p.26).

### A New President with a New Set of Ideas

The 2009 elections brought in President Jacob Zuma who introduced a planning commission in the Presidency. A new ministry, the Economic Development Department (EDD) was created and mandated to develop policy for the Department of Trade and Industry. This created the possibility for conflicting policy development and issues of where the balance of power would lie (Nattrass 2008, p.12). Masilela & Mthiyane (2014) attribute such a "super-ministry", similar to the one set up in 1994 for the RDP, as an act undertaken by government when a change in socio-economic policy is "heated". Choosing Trevor Manuel however, the previous minister of finance who implemented neo-liberal policies, confounded the ANC left. Nattrass (2008) also questioned whether Manuel would have any power over labour policy, which he didn't in his previous role as finance minister and feared that there would be little coordination amongst the ministries. As the government was supposedly moving from monocratic government (Mbeki) to ministerial government with greater autonomy (Zuma), with ministries developing and implementing their own strategies, it is difficult to understand how this would work practically, particularly given the issues that led to the abolition of the RDP office in the Presidency during the mid-1990s.

Three major strategy documents were produced: The Industrial Policy Action Plan (IPAP) by the DTI; the New Growth Path (NGP) by the EDD; and the National Development Plan (NDP) by the National Planning Commission. A review, not critique, undertaken by the Centre for Development and Enterprise (Kaplan 2013) found that although all three prioritised employment growth and some alignment, significant differences existed between the IPAP and NGP on one hand and NDP on the other. As the differences underpinned and informed different policies proposed by each, it was crucial that the most appropriate policies were selected, if government policy was to be coherent and effective. The policy interventions are summarised in Table 6-9 below.



Table 6-9: Key Policy Interventions of Zuma Presidency (2009)

Policies	IPAP	NGP	NDP
Exchange Rate	<ul style="list-style-type: none"> <li>Unqualified support for depreciation (devaluation)</li> </ul>	<ul style="list-style-type: none"> <li>More competitive (strengthen)</li> <li>Requires <ul style="list-style-type: none"> <li>fiscal restraint</li> <li>accord on wages &amp; prices</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>No nominal devaluation</li> <li>Conditions for effective devaluation do not exist</li> </ul>
Development Finance Institutions and Capital Subsidies	<ul style="list-style-type: none"> <li>Expanded DFI's</li> <li>Investment subsidies</li> </ul>	<ul style="list-style-type: none"> <li>Expanded DFI's</li> <li>Investment subsidies</li> <li>Development bond</li> <li>State-owned bank for rural areas</li> </ul>	<ul style="list-style-type: none"> <li>None advanced</li> </ul>
Local Procurement	<ul style="list-style-type: none"> <li>Unqualified support</li> </ul>	<ul style="list-style-type: none"> <li>Unqualified support</li> </ul>	<ul style="list-style-type: none"> <li>Caution on higher costs jeopardising growth</li> </ul>
Sector Support Strategies	<ul style="list-style-type: none"> <li>Wide ranging industrial policy, with emphasis on beneficiation</li> </ul>	<ul style="list-style-type: none"> <li>IPAP plus <ul style="list-style-type: none"> <li>Infrastructure</li> <li>Agriculture</li> <li>Mining</li> <li>Green economy</li> <li>Tourism</li> <li>High level services</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Protect sectors with long term prospects</li> <li>Short term support for areas effected by cyclical downturns</li> <li>Financial sector</li> <li>Retail and business services</li> </ul>
Labour Market	<ul style="list-style-type: none"> <li>No consideration</li> </ul> <p>Target: 2 447 000 direct and indirect by 2020</p>	<ul style="list-style-type: none"> <li>Productivity accord</li> <li>Tighten sub-contracting, labour broking and outsourcing</li> <li>Support for workers in unorganised sectors to achieve greater organisation</li> </ul> <p>Target: 5 000 0000 decent jobs by 2020</p>	<ul style="list-style-type: none"> <li>Youth wage subsidy</li> <li>Wage restraint</li> <li>Regulation and subsidy to labour placement sector</li> <li>Ease dismissal procedures</li> <li>Migration policy reform to attract foreign skills</li> </ul> <p>Target: 11 000 000 by 2030, which is decent work over the long term</p>

Source: Kaplan (2013)

## Employment Equity and Broad Based Black Economic Empowerment (EE and BBBEE)

Inequity of employment opportunities and personal economic development was a key legacy of apartheid; needing to be urgently addressed by the first democratically elected government, to ensure that political change also brought tangible financial transformation. Addressing the domination of whites in the workplace, and specifically white males, where job reservation was ensured by statutory discrimination, was an immediate priority for the GNU; with the 1995 White Paper on the Transformation of the Public Sector as an obvious starting point, which set targets to 1999<sup>63</sup>. Post 1999, the workforce needed to demographically replicate broader society; and a long-term labour strategy was needed to entrench reform and transformation in the labour market, which was the objective of the Report of the Presidential Commission to Assess Labour Policy. The Report recognised that a balance “*needed to be struck between measures to protect workers and promote equity, and the need to promote efficiency and labour market flexibility*” (National Treasury 2008), and resulted in several pieces of legislation, namely: The National Economic Development and Labour Council Act (1994); The Labour Relations Act (1995); Basic Conditions of Employment Act (1997); Employment Equity Act (1998); and the Skills Development

<sup>63</sup> A minimum of 50% black representation at management level; with 30% of new recruits to be female; and a 2% representation in the workplace of people with disabilities by 1999.

Act (1998). The Employment Equity Act made provision for non-discrimination and commenced the process of redressing past inequities by providing preferential access for black people<sup>64</sup>, women and people with disabilities through affirmative action, defined in the Act as, “*measures designed to ensure that suitably qualified people from designated groups have equal employment opportunities and are equitably represented in all occupational categories and levels in the workforce of a designated employer.*” In 2001, the department of labour reported that the implementation of employment equity had been “*slow but steady*”. Thompson & Woolard (2002) interrogated government’s employment equity performance for the period 1995 – 2001 and found that great strides had been made in improving the representation of different race groups in the public sector workforce. By example, senior management positions occupied by black people in government went from 37% in 1995 to 55% by 2001. Indeed, efforts to transform the three tiers of government and state-owned enterprises (SOE) intensified from 2000 onwards, and in 2016 broadly reflected the economically active black population (Table 6-10<sup>65</sup>). This, however, has not been the case in the private sector – now increasingly a major thorn of emotive contention between public and private sectors. In this context, the different perspectives on employment equity, a major national debate, are succinctly captured in the findings of a detailed study commissioned by the Department of Labour (Bezuidenhout & Lewins 2008); showing two contending arguments. One; that continued racial imbalance in the private sector persists, and that an unwillingness to implement national government policy and legislation is hindering employment equity; with high levels of unemployed, mainly African graduates, bearing testament to this. This is then countered by the private sector, which points out that:

*“...the major obstacle to employment equity is the lack of skill among designated groups<sup>66</sup>. Companies that have aggressively implemented targets, such as Eskom, have had to suffer the consequences of rising levels of incompetence.”* Bezuidenhout & Lewins (2008, p.64)

The research finds evidence to support both viewpoints, but notes that progress at the national level has been uninspiring – pointing to a one size fits all approach; government opting to pursue high profile cases without the necessary supportive base of general enforcement in place; the prevalence of poor reporting systems<sup>67</sup>; a tendency to fixate on top and managerial positions, or as the report puts it, “professional and elite classes in society”; and a lack of genuine engagement. In short, the public and private sectors, were both found to be wanting.

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<sup>64</sup> The Act defines “Blacks” as a generic term for Africans, Coloureds and Indians.

<sup>65</sup> For the purposes of this analysis, the percentages listed in the table are the sum of male and female, black, Indian and coloured people. In other words, everyone except the white population.

<sup>66</sup> The country’s education system continues to deliver highly uneven school and tertiary graduates, determined by the institution attended. Several universities lost their accreditation for a Bachelor of Commerce by industry bodies in the 1990s (Bezuidenhout). In 2017, 17 universities that offer LLB were reviewed, four of which were served notice that if standards were not improved accreditation would be withdrawn [www.derebus.org.za/withdrawal-accreditation-response-universities/](http://www.derebus.org.za/withdrawal-accreditation-response-universities/).

<sup>67</sup> This was experienced first-hand by the researcher who found the pre-2008 Commission for Employment Equity reports to be inconsistent and difficult to interpret

Table 6-10: Workforce Profile of Black People in Government, SOE's and Private Sector

Category	Sector	2009*	2012	2013	2015	2016
Top Management	All Government	79%	85%	87%	86%	85%
	State Owned Enterprises	**	66%	70%	79%	76%
	Private Sector	26%	28%	30%	26%	28%
Senior Management	All Government	68%	77%	79%	84%	82%
	State Owned Enterprises		60%	65%	72%	72%
	Private Sector	32%	33%	32%	34%	36%
Professionally Qualified	All Government	76%	82%	83%	83%	82%
	State Owned Enterprises		61%	65%	69%	73%
	Private Sector	42%	45%	49%	48%	50%
Skilled Technical	All Government	83%	89%	90%	91%	89%
	State Owned Enterprises		76%	77%	77%	79%
	Private Sector	62%	67%	72%	71%	73%
<b>Economically Active Black Population</b>		<b>88%</b>	<b>88.5%</b>	<b>88.5%</b>	<b>90%</b>	<b>90%</b>

\* As annual changes are incremental not all years are shown

\*\*2009 CEE figures for SOE are included under private sector

*Source:* Department of Labour (2016)

The challenges and critiques of government as burgeoning employment equity employer, appeared to then be reinforced by President Zuma's actions in 2009, when he increased an already oversized cabinet. A study (Bhorat & Pillay 2015) noted that public sector employment under the expanded public works programme (EPWP), increased by more than half a million between 2008 and 2014, and grew fastest in 2009, suggesting that it offset, purposefully or not, the effects of the global economic downturn. Most of these were unskilled (sweepers, cleaners and farmhands) and semi-skilled workers (police / traffic officers and care givers). Few skilled jobs were created. Average wages in the public sector are higher than those in the private sector, which is worrying for the authors. They warn of the dangers of following a policy of public sector job creation in an environment where the economy is not able to create new jobs and where the private sector is actively avoiding new employment. This exercise did increase the levels of employment equity, which has improved markedly since 2008, as can be seen in Table 6-10.

Beyond employment equity, is the wider concept of “broad based black economic empowerment (BBBEE)” legislated into law in 2003. It is a policy framework that seeks to facilitate the greater economic inclusion and advancement of people discriminated against under apartheid – supported by and intertwined with other laws, such as the employment equity act, with many overlapping aims and functions between the two (Horwitz & Jain 2011). A company measures their compliance by way of a BBBEE scorecard; and different scorecards apply to different types of companies. Due to a widely held concern, not without merit, that many companies were merely complying with BBBEE - resulting in insufficient transformation - the codes were revised in 2013. Table 6-11 lists the BBBEE categories pre and post 2013, with their weighting in brackets.

Table 6-11: BBBEE Codes

<b>BBBEE Codes (2003)</b>	<b>Revised BBBEE Codes</b>
Ownership (20 +3 bonus)	Ownership (25)
Management Control (10 + 1 bonus)	Management Control (absorbs EE) (15 + 4 bonus)
Employment Equity (15 + 3 bonus)	
Skills Development (15)	Skills Development (20)
Preferential Procurement (20)	
Enterprise Development (15)	New Enterprise and Supplier Development (absorbs PP) (40 + 4 bonus)
Socio-Economic Development (5)	Socio-Economic Development (5)
<b>Total Points = 107</b>	<b>Total Points = 118</b>

Three categories are identified, based on the size of the company, (2003):

- Exempt micro-enterprises: Turnover of R10 million (R5 million) are not required to have a scorecard, but must demonstrate that they fall into this category;
- Qualifying small enterprises: R10 – R50 million (R5 – 35 million). Until 2013, firms could choose four of the criteria (each worth 25% of points), but from 2013 five criteria must be used; and
- Generic enterprises: Greater than R50 million (R35 million), all criteria apply.

BBBEE scoring to determine level or status are shown in Table 6-12

Table 6-12: BBBEE Levels

<b>BBBEE Status</b>	<b>2007</b>	<b>2013</b>	<b>Recognition Level</b>
Level 1	>100	>100	135%
Level 2	85-99	>95-100	125%
Level 3	75-84	>90-95	110%
Level 4	65-74	>80-90	100%
Level 5	55-64	>75-80	80%
Level 6	45-54	>70-75	60%
Level 7	40-44	>55-70	50%
Level 8	30-39	40-55	10%
Non-compliant	<30	>40	0%

Compliance with the BBBEE Act is entirely voluntary for the private sector. However, it becomes a requirement if a private company responds to a public tender or enters into a private public partnership).

At a more strategic level, the state has created opportunities for black owned firms through corporate incorporation, the reassignment of mineral rights and targeted programmes such as the black industrialisation programme. However, the allocation of government contracts has seemed to mostly favour a select few, creating black elites. Surrendering political power in 1994 did not mean that the white elite did the same with economic power, and it has been strongly argued that while a black middle class has undoubtedly been created, the white elite have “captured” or have merged with the politically connected black elite to retain power; allowing inequality and chronic poverty to persist. Unsurprisingly the first targets were proclaimed in the mining sector and black business heavyweights are at the heart of the MEC, while highly paid black executives run state owned enterprises (Fine 2009, p.27) (Gelb 2007, pp.5–7) (Seekings & Nattrass 2015) (Baker & Phillips 2014, p.797) (Freund 2010, p.21). More recently, a louder chorus of voices pointinz to mounting evidence that despite vigorous implementation of BBBEE, the system is regularly manipulated for fronting or rent-seeking instead of real business, corrupts society

and damages the reputation of legitimate black business people, leading to increases in the cost of goods and services. There is little doubt however that the private sector has not responded adequately to BBBEE, thus exacerbating its weaknesses and providing its critics the opportunity to misinterpret its intentions (Makgetla 2006, pp.73–89) (Yudelowitz, 2017).

## 6.6.2 The National Electricity Supply Industry: To Restructure or to Reform?

### Setting the Scene

Leadership change at Eskom and the South African democratic transition coincided in early 1994, when the uncertain and volatile political situation during that period prompted the Eskom board to replace McRae before his scheduled retirement in August 1994. In April 1993 Eskom announced that Allen Morgan would succeed McRae in March 1994, a month before elections (Conradie & Messerschmidt 2000). Thereafter, following the elections, reforming the ESI was a high on the agenda of the ANC, as was eventually formally formulated and outlined in the 1998 Energy White Paper. Due to the inter-related nature of the ESI and the far-reaching objectives of the proposed reform, which included municipalities and their distribution networks, this section confines itself to Eskom. Municipal and broader ESI developments are covered in detail in the next chapter.

### New Energy Policy and Corporatisation of Eskom – Running to Stand Still

In December 1998, the DME issued the Energy Policy White Paper<sup>68</sup> which listed the following objectives for the ESI: to continue with the electrification programme while ensuring access was provided at affordable rates; improve energy governance through increased government coordination and planning; stimulate economic development through enabling legislation; enable the introduction of greater competition, with key objectives being cost-reflective tariffs and regional distributors; and to promote energy efficiency through an integrated planning approach.

*“Government will establish transitional processes that will lead up to the establishment of independent regional electricity distributors. ....realising the goal of universal household access to electricity. ....electricity tariffs to become increasingly cost-reflective at all levels of the industry. ....Eskom will be restructured into separate generation and transmission companies*

(Energy White Paper 1998b, p.11)

The energy policy aligned with government’s newly adopted neo-liberal macroeconomic policy, which aimed to attract private investment so as to create a competitive environment, and also driven by concerns with the single supplier model - monopoly power. This stance was in stark contrast to pre-democratic policy which valued state provision of low cost energy and security of supply at any cost – the former to fuel its energy intensive industrialisation policies and the latter to support the state, both of which were typified by the nuclear build programme, Eskom’s continuous build programme and the SASOL coal to oil programme (A Eberhard 2007, p.31). Ironically, government now firmly supported privatisation, but labour and trade unions were vehemently opposed to disposal of state assets and wanted to retain a

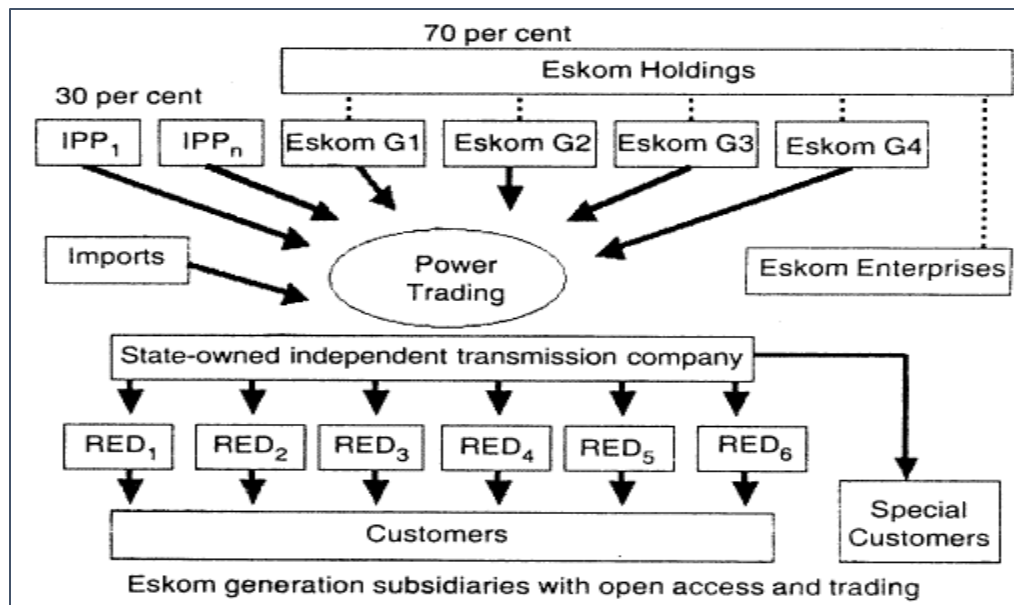
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<sup>68</sup> The White Paper was heavily influenced by the findings and recommendations of the Electricity Restructuring Interdepartmental Committee (ERIC) – refer to Page 168 for a more detailed explanation

vertically integrated power utility to provide low cost electricity to the poor. Distribution, they stated, could be rationalised but into one national distributor (A Eberhard 2007, p.32).

In 1998 government passed the Eskom Amendment Act, which vested Eskom's equity to the state, repealed its tax-free status and formed it as a limited liability company with share capital. The Eskom Conversion Act (2001), created holding companies for its generation, transmission and distribution businesses. The intention was to transform the legal status of Eskom to one that would allow it to list on the stock exchange. From 2002, Eskom would be required to pay dividends to its sole shareholder and a newly established board was comprised almost entirely of big business representatives, academics and a sole representative from the Department of Public Enterprises (McDonald 2009, p.76).

The private sector was targeted to generate 30% by 2004, and government signalled its intent by contracting consultants to design an electricity market and an exchange for bilateral contracts and financial hedges. Eskom's lost revenue would be recouped from its entry into the continent. Figure 6-7 represents the future structure of the ESI as envisaged by decision made in a 2001 cabinet meeting (Eberhard 2005b, p.5315)



Source: (Eberhard 2005b)

Figure 6-7: Proposed ESI Structure Based on 2001 Cabinet Decision

Eskom had little choice but to comply with its shareholder's instruction and started ring-fencing its operations. Internally however, it was a different story. After many decades of being the only game in town and controlling ESI, it wasn't going to go down without a fight. Intense lobbying against the changes was conducted at the highest echelons of government, while externally, public statements were designed to raise doubt with business and the public:

*“Eskom has the lowest electricity price in the world, and excellent technical performance when benchmarked against the rest of the world. We need clear objectives as to why we are going this route.”*  
Chalmers (2001)

In this, Eskom found an unlikely ally in organized labour, who objected to the proposed reforms on the ideological standpoint of anti-privatisation and embarked on national strikes against government’s plans and the lack of transparency. The lead union (COSATU) estimated that over 5 million participated in the action. Eskom’s consumers were also strongly opposed to the privatisation plans (Ashe 2002; Coetzee 2010), while fate also played a role. The California energy crisis and Enron’s failure in late 2001 was a godsend which strengthened the anti-reform cause. Ultimately the political cost of forcing change was too high and NT announced the postponement of the privatisation programme, citing the poor global economic environment. Shortly after the 2004 national elections, government announced that it would no longer seek to establish a wholesale market for electricity and would not be selling Eskom assets, but it would seek private sector power producers to build and operate up to 30% of new supply; but even in these projects Eskom would be allowed to hold a majority share. In 2005 it was announced that tenders would be issued for Independent Power Producers (IPPs) leading to strong interest from international energy companies and financial institutions. However, private sector investments into new generation did not materialise due to inappropriate legislative frameworks and stubborn resistance from many stakeholders, most notably those who opposed privatisation in 2002. During this period of policy uncertainty no new investments in generation were made and Eskom’s reserve margin continued to decline – falling below the international accepted norm of 15% to single digit (~5%) in 2004 (Figure 6-9). Something had to give, and it did when demand outstripped supply and the first blackouts were experienced. (McDonald 2009; Eberhard 2000; Eberhard 2005b; Pickering 2010; Chettiar et al. 2009; Kessides & Maurer 2007)

#### National Blackouts and Eskom – “There is no Crisis!”

*“We shouldn’t frighten ourselves too much. Yes, indeed, there was a problem....but there is no crisis. Whatever needs to be done to make sure that the economy grows and new investors come into the economy is being done. We shouldn’t be holding out as threats to local and foreign investors that something disastrous is going to happen...”*

President Mbeki addressing Parliament after the 2006 blackouts in the Western Cape

It should not even be contemplated that the national blackouts came without warning. As far back as the mid-1990s Eskom notified government that the existing fleet of power stations would be inadequate by 2007 and to avoid a supply shortage construction would need to start before 2000 – as recorded in the 1998 Energy White Paper; a tacit acknowledgement. With a government moratorium in place, Eskom could not act, but by 2005 it became evident to government that not only was the private sector not going to invest in new power plants under the existing framework, but also that the entire electricity system was under serious threat and imminent collapse. The restrictions were lifted and Eskom was instructed to construct the 4.8 GW Medupi and equally sized Kusile coal-fired baseload power station, the first coal-fired power stations to be built in two decades. Construction of Medupi only started two years later in 2007 due to planning and permit approval delays, which immediately underlined Eskom’s loss of expertise in the 10 or more years since Majuba was completed. But 2005 was truly too late. The system, under

persistent increasing strain, started to crack. The first signs manifested in the Western Cape towards the end of that year and the chronology is summarised by Jaglin & DuBresson (2016) in Table 6-13.

Table 6-13: Chronology of Blackouts in the Western Cape

Date	Event
11 November 2005	Switch failure at Koeberg power plant resulting in a regional outage lasting several hours
16 November 2005	Precautionary shutdown of unit 2 of Koeberg plant due to a fire near high voltage lines
23 November 2005	Unit 2 shutdown due to a coolant test showing it is no longer fit for purpose
25 December 2005	Koeberg Reactor 1 badly damaged due to a faulty installation causing a long term shut down
18 February 2006	A shutdown of a coal power station in the north east of the country has a knock on effect resulting in Koeberg Unit 2 shutting down, resulting in a 5 hour blackout for the province and intermittent outages for the rest of the week
28 February 2006	Technical problems lead to the entire Koeberg plant being shut down. The entire province is without electricity for several hours followed by a week of scheduled blackouts
8 March 2006	Blackouts continue despite Eskom assurances that things were back to normal

When asked in Parliament to comment on the power outages in the Western Cape, President Mbeki recognised there was a problem, but stated that it posed no crisis and that the upside was economic growth through infrastructure expansion. In the president's view, the blackouts did not have any adverse effects on investment (CDE 2008, p.12).

The blackouts in Cape Town were just a sign of things to come. In November 2007 the country ran out of power. It is of course true that if construction of new power plants had been started timeously, the additional supply would likely have averted the crisis, but an overlooked fact however, is that demand never exceeded supply. Eskom's full generating capacity at the time was 39 GW, and demand never exceeded this amount. When the crisis broke, as much as 25% of Eskom's generating capacity was not functioning (Fig 2010). The crisis was further exacerbated by low stocks of coal supplies, low quality of coal, logistical coal supply issues, heavy rains, insufficient maintenance of power plants and poor planning and demand forecasting – issues which were raised by the World Bank in a 2007 public report (Chettiar et al. 2009; Kessides & Maurer 2007). Power stations which were being run at full capacity finally gave in and load shedding was implemented nine times in November and December 2007. There was a respite during the traditional December holiday when many industries close, but as soon as the country went back to work so too did the outages. National rolling blackouts commenced in January 24, 2008 and it took Eskom a fortnight to stabilise the grid, after which blackouts were less frequent but continued until June. Cabinet declared a national emergency, while the effect on the economy was immediate and devastating. Mines were forced to shut down for five days to avoid a nationwide blackout and were required to reduce their consumption by 10-20% before they could resume operations. Exacerbated by a global economy leaning towards recession, mining production suffered, falling by 22%. The country's biggest gold producer expected power shortages to cut production by 400 000 ounces (\$363m) and the second largest miner forecast that running on 90% power would reduce production by 15-20% annually (MacNamara 2008). Thousands of people were retrenched, and all industries and businesses suffered massive financial losses – especially cold-chain operations, tourism and service industries. It is estimated that load shedding cost the economy R2 billion per day (Jaglin & DuBresson 2016; CDE 2008; Styán 2015).



## **New Build Programme**

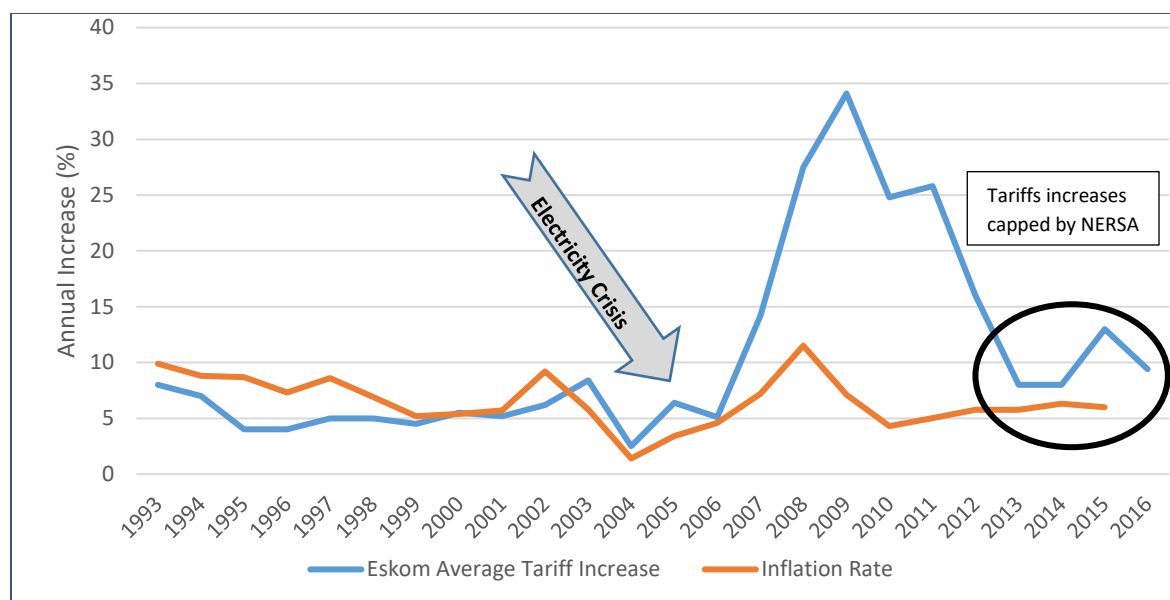
Having kept infrastructure investment to a minimum while privatisation was being considered, Eskom had catching up to do. Its total capacity expansion programme included lengthening and strengthening transmission lines, improving substation capacity, development of new baseload, improving pumped storage and peaking capacity, the re-commissioning of mothballed capacity, and the refurbishment of existing operating capacity, which would add 17.1 GW of generating capacity to the existing fleet (Eskom 2012). But these investments would only yield results in the medium to long term. To deal with the day to day crisis of insufficient supply, 1 GW of diesel turbines were installed in 2008/09, with an additional 1 GW added in 2014/15, while its Demand Side Management programme, which existed only in name up until that time, was ramped up, with a dedicated division finally formed and given adequate human and financial resources. However, shortages persisted and blackouts became the norm. There was a short respite due to a doubling of efforts to stabilise the grid during the 2010 Soccer World Cup, and aided by reduced demand due to a slump in the economy caused partly by global financial crisis fallout and partly by electricity shortages. The system remained on borrowed time as maintenance was neglected once again and the 2008 experience was repeated in June 2013: The reserve margin dropped to 0.2%; four “power emergencies” (rotational load shedding due to severe system constraints) were declared between November 2013 and March 2014; scheduled load shedding commenced in March 2014 and the entire system came close to collapse on June 30, 2014; on October, 30 Eskom’s biggest clients were instructed to reduce consumption by 10%; and January and February 2015 saw the introduction of weekly load shedding, allocated a number (1, 2, 3 and 4) to better communicate the severity of the shortage to the public. In total there were 56 days of load shedding between January and April 2015 with a warning from the Minister that load shedding would be with us for the next 18 months (Jaglin & DuBresson 2016, 72–75) (Government of South Africa 2014).

## **Funding the New Build Programme**

The financial consequences for Eskom were as severe as the technical. In addition to the capacity expansion programme, the two coal power stations being constructed had massive budget overruns, costly gas turbines operated for long periods and high remuneration packages increased the cost to company of personnel, to name but a few of the rising expenses that now had to be funded. In contrast, from 1990 until mid-2000’s Eskom operated a fleet of power stations which had been paid off. Electricity tariff increases were kept low as per the price compact, as had always been the case during times of plenty; with no provision made for new power stations. In real terms, the electricity tariff decreased during this period (Figure 6-8); but when in 2005 funds were needed for capital investments, Eskom defaulted to the practise adopted in the 1970s and increased its tariffs substantially. Between 2007 and 2015, tariffs in real terms increased by 170%, and would have been higher if NERSA had not capped the requested tariff increases<sup>69</sup>.

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<sup>69</sup> In 2013 Eskom applied for a 16% annual average tariff increase for a five-year period but was capped at 8% by NERSA. This figure was revised upwards to 13% in 2015 and 9.4% in 2016 when Eskom requested a review



Source: Statistics South Africa and Eskom

Figure 6-8: Nominal Annual Eskom Tariff Increases and Inflation Rate (1993 – 2016)

Ironically, perhaps predictably, the electricity crisis created the conditions for IPP's to enter the market with Renewable Energy (RE) generation. In 2009, NERSA approved a Renewable Energy Feed-In Tariff (REFIT) for certain RE technologies<sup>70</sup>, followed by the draft selection criteria "scorecard" for REFIT and held public hearings to discuss the same. In 2011, the REFIT programme was taken over by National Treasury and the Department of Energy who changed the procurement method to a competitive bidding process, but with a much larger ambition. Additional mandatory criteria were introduced, namely job creation, local content, local economic development and black ownership. This, the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP), in contrast to the previous attempt a decade earlier to privatise generation, was well received by the private sector. By September 2016, 6.376 GW of RE had been procured from 102 IPP's, 2.738 GW of which had been connected to the national grid (IPP Office 2016). This contrasts with Medupi and Kusile which were plagued by cost overruns and delays. In January 2007 Eskom stated that Medupi was expected to cost R56 billion, with the first unit (800 MW) to be commissioned in mid-2011, while the first unit was only actually commissioned in 2015 and the budget had increased to R105 billion (Crookes 2015). This revised figure excludes interest and a more accurate figure is Eskom's original estimate of R125 billion. As at December 2016, no additional units had been commissioned.

### Eskom in Crisis – Again

Having created the regulatory framework, government failed to enforce Eskom's paying of annual dividends as a profit-making company - effectively sending weak and ambiguous signals to the private sector on the possibility of effective partnerships and confirming that no real strategy was in place (Jaglin & DuBresson 2016, p.67). There has also been continuous political interference. Between 2005 and 2017, the chairman of the Eskom board has been changed six times and its CEO ten; the Department of Energy

<sup>70</sup> Solar photovoltaic, solar thermal, concentrated solar and wind.

has had five ministers and the Department of Public Enterprise, three. The Eskom board and senior management have seen similar wholesale changes occurring on a regular basis. These events have led to a lack of continuity, stability and confidence at best and near catastrophe at worst. Here, Eskom's crisis can be split into two parts – pre and post Zuma's appointment as President in 2009.

Between 2000 and 2005, when Eskom could do no wrong. This instilled a false sense of infallibility with government and Eskom management. The failed privatisation programme, during which Eskom made minimal capital investments while awaiting an outcome, was the turning point. In Jaglin's view, Eskom's management made the situation infinitely worse due to a litany of poor decisions and choices. The first, was the lack of a recognised leader, able to control and command the support of not only management, but also of technical and engineering personnel. Employees focused on their rivalries, deferred responsibility by blaming each other and sought political support to address technical failings, most notably the lack of security of supply and future planning, as pointed out in a detailed report submitted to the Department of Public Enterprises (see Wilson & Adams 2006). A second issue was Eskom's aggressive and unapologetic drive to exceed national affirmative action quotas, which entailed the large-scale removal of qualified white managers and technicians. Eskom (correctly) prided itself at being at the forefront of employment equity, which was started under the previous leadership in the early 1990s. Technical and management positions occupied by blacks went from 5% in 1993 to 50% in 1997 when Maree retired (Jaglin & DuBresson 2016, p.22). In truth, Eskom's motivation at that time was both self-serving, recognising that while Eskom performed, government would find it hard to intervene, and also borne of a genuine sense to address the inequities of practises under apartheid. An aggressive short-term quantitative employment equity target introduced in 1997 required 50% of management to be occupied by black employees. In 2006 the next phase of transformation was introduced – henceforth the recruitment of white male technicians, including temporary appointments, was prohibited and the promotion of white employees was frozen. Employment equity targets were revised upwards, namely 65% black senior executives, of whom 40% needed to be female. These targets were met well in advance of the scheduled date, and achieved during a period when Eskom was reducing its overall staff numbers (Jaglin & DuBresson 2016, p.68). Transformation and overall downsizing inevitably meant that white staff members were sacrificed, many of whom were highly skilled and experienced. Morale and loyalty amongst white employees dropped, and those who could leave voluntarily, did. The trade union Solidarity, whose membership is almost exclusively white, conducted an internal survey amongst its Eskom members in January 2006 and warned of a looming skills crisis (Styan 2015, p.91). The low output of black, and especially black female, technically skilled graduates most of whom had limited experience, compounded the skills drain at Eskom. In the midst of an employment purge, it is also highly probable that white staff at Eskom were unlikely to over-extend themselves when it came to training and the transfer of skills to those in waiting. The existence of a skills crisis was initially rejected by Eskom management, but in January 2008, at the height of the national rolling blackouts, there was nowhere to hide, and the CEO (Maroga<sup>71</sup>) confirmed that there were 848 skilled vacancies. To alleviate the situation a national and international recruitment drive was initiated, and the moratorium on hiring white staff was lifted, and ex-employees were asked to re-join the organization, with little success (Fig 2010). By now, Eskom was fast losing its long-held aura of being a highly regarded employer for skilled staff, morale was low and those who could leave, across all races, did. The third facet was the requirement that procurement, and more specifically

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<sup>71</sup> Written reply by the Minister of Public Enterprises Alec Erwin to a parliamentary question asked by an opposition party in March 2008, on the number of vacancies in core, critical and scarce categories [www.news24.com/SouthAfrica/PowerCrisis/Eskom-on-massive-skills-hunt-20080304](http://www.news24.com/SouthAfrica/PowerCrisis/Eskom-on-massive-skills-hunt-20080304)

the supply of coal, be diverted to emerging, black owned small to mid-sized suppliers, under significantly shorter contracts than the existing norm of 40 years. The consequences included reduced quality of coal supplies, deterioration of road networks due to old and poorly maintained trucks being used instead of the railways and irregular deliveries that created inventory management difficulties, while stock also came at much higher prices. Contracts with new suppliers were poorly negotiated and often forced through Eskom's legal team or outsourced when the legal team refused to sign off on contracts<sup>72</sup>. Eskom, who had employed an internationally respected management consultant (Susan Olsen) in 2006, when advised of the pending crisis, terminated her contract. This development only came to light in 2009 when the official opposition released the leaked report (Hogg 2009).

*"The technical argument carried little weight in comparison to the political priority."*

Jaglin & DuBresson (2016, p.70)

Maroga presented his 25-year vision to the Eskom board in the form of an open strategy paper on the 22<sup>nd</sup> of October 2009 (Politicsweb, 2009). The strategy begins by rambling on about historic events that brought Eskom to the position it is in – starting at the very beginning when the Commission (Eskom) was established in 1922 to serve the nation by not operating at a profit, the capital development fund (1972), the DeVilliers commission (1984), the energy white paper and privatisation (1998), the 2001 conversion act and electricity pricing policy of 2008. The next section is a tirade on the pervading culture of "*white supervision mentality*" and the next half of the strategy lists proposed actions and outcomes to transform Eskom. The 8 000 word strategy finds no space for personal introspection or accountability, and if anything, the CEO deflects shortcomings and critique, either to circumstances "*The past three Chief Executives of Eskom all served during a period of excess capacity*" or white supervision – referring to the leaked Olsen report "*The manner in which the Olsen report was given status and attention is one example of white supervision mentality.*" Maroga resigned in November 2009.

The second period, under the Zuma presidency, appeared to be more of the same. But it wasn't. It was coordinated and sinister; and the Eskom crisis up to 2009 provided the perfect ruse to loot state resources on a grand scale. To do so, a continuation of the chaos surrounding the utility, namely general corruption and inept management, was necessary in order to distract South Africans from what was really going on.

*"Instead, more and more information is coming to light that seems to corroborate claims that a coordinated political project of state capture has been underway, whereby governance structures are systematically repurposed to serve corrupt interests."* Eberhard & Godinho (2017)

Within this context, the period 2010 to 2014 is characterised by: constrained supply; the continued exodus of skilled staff, (3 297) leaving Eskom with 3 716 skilled staff vacancies in 2015; contested power plant maintenance contracts; and operational mayhem, such as operational tenders awarded to suspect service providers. The primary focus however was the weakening of governance structures. Competent board members were replaced with lackeys and the revolving door of CEO's and Board chairpersons and members allowed graft of the highest order to take place with no accountability. For a detailed account see (Eberhard & Godinho 2017) (Styan 2015; Jaglin & DuBresson 2016)

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<sup>72</sup> Meeting held with lawyer employed by Eskom 2007-2015 (declined to provide personal details) 3 November 2016

In August 2014 cabinet announced the appointment of Tshediso Matona as the new CEO of Eskom, who would start in October. Matona, a respected government bureaucrat, was carefully selected to address Eskom's financial and generation woes, having chaired the interdepartmental task team set up by the Department of Energy, Treasury and Department of Public Enterprises to find solutions to Eskom's problems. Nationwide load shedding commenced a month after Matona took over, and less than six months into his role he was abruptly suspended with four other executives by the chairman of the board, a week after initiating an audit into Eskom tender processes. The board denied that the audit and the suspension were linked and stated the *"inquiry, not an investigation, into the poor performance of generation plants, delays in bringing plants on-stream, the high costs of primary energy, and cash-flow problems"* and *"there is no intent or suspicion of wrongdoing, there are no charges against them. There is no malice, there is no wrongdoing that is under consideration"* (SAPA 2015). Matona disputed his suspension and in May 2015 parted ways with Eskom after a settlement (undisclosed) was reached between the two. In August 2015, President Zuma apologised personally to Matona for the manner in which he had been treated, an action which confused many, as Eskom's chair (Tsotsi) had insinuated that he had the president's blessing prior to suspending Matona (Letsoalo 2015) - This was clarified by Matona during the 2017 parliamentary inquiry into the mismanagement of funds by Eskom, stating that President Zuma did not call to apologise but to discuss future career options (le Cordeur 2017a). Public outcry over continuous blackouts, the perilous state of the electricity supply system, management turnover and high annual tariff increases, took its toll; and during the Matona CEO fiasco, the board appointed the international law firm Denton to ascertain the reasons for the Eskom crisis. Just two months into their 12 month contract however, the firm was stopped from completing the work by the new Eskom chairman (Ngubane), who after receiving an initial draft stated that enough information had been collected for corrective action to be taken internally – saying that its findings were broadly in line with what the new Eskom board had already ascertained, and was in the process of correcting (Ryan 2017). The report was initially kept under wraps, but under extreme public pressure and a realisation that it was about to be leaked, a heavily censored version (protecting names and removing details) was made public in 2017. The report found that payments were made without invoices, large contracts (R30 billion) were given to companies with no "footprint in the industry" and that staff benefitted unduly from such transactions (le Cordeur & Myburgh 2017).

Brian Molefe was then appointed as the Eskom CEO and given the same mandate as his predecessor – addressing the ongoing blackouts and financial crisis at Eskom. His influence appeared to be immediate, the blackouts ceased and stability returned. After his departure, Paton (2017), correctly pointed out that it had not, and that the utility was possibly in a worse state than when he arrived. Indeed, under Molefe's control, transparency ended and the means with which the system was stabilised was not publicly available. For example, industry analysts approached the courts in 2016 to gain information, which prior to his appointment had always been disclosed (Ensor 2016). The secrecy surrounding Molefe's management decisions also make it difficult to analyse his role in ending blackouts. Evaluating external events does provide some insight though: Several years of weak economic growth led to a long term, if not permanent, reduction in electricity demand, as users went out of business, reduced operations or did not invest in new projects – industry, mining, agriculture and transport were at pre-2007 demand levels. At the same time, new generation was continually being added by Eskom (phase 1 of Medupi added 800 MW, Ingula pumped station added 1 GW by 2016 and there were other contributions). The REIPPP programme was also adding supply on a regular basis during his tenure (2.78 GW by 2016), and Eskom's DSM programme had eliminated over 1 GW of demand. It would appear that Molefe's arrival was more

well timed than anything else, while the excessive praise he received for ending blackouts is at best contentious, but in truth unwarranted. Matona, when given the chance to publicly provide his version in the 2017 parliamentary inquiry and being asked if loadshedding would have ended without Molefe, provides the most plausible explanation:

*“I was confident that I could achieve. He could not have done that alone. He found a team fighting this war and the plans. He achieved the objective, so I don’t think Brian would himself claim these exceptional capabilities. He acknowledged the work that had been done before he was there. This is not a competition between Brian and I.”* Matona, Parliamentary Inquiry: 7 November 2017

Molefe resigned under a cloud in December 2016 when a report implicating him with graft was issued by the public protector (Public Protector 2016), while a now stabilised Eskom did what it has always done – take centre stage – and not necessarily in the most positive way. Indeed, the acting CEO announced in January 2017 that Eskom no longer needed renewables, in that they were too expensive; and would thus not sign any additional purchase agreements with the successful bidders under the government backed REIPPP programme. Industry experts and academics immediately questioned Eskom’s simulation model (le Cordeur 2017c) and Eskom’s stand will force government to act or face the prospect of legal action.

*“Eskom views the REIPPP Programme as a loss of market share”*

Eskom executive at a presentation to the Energy Intensive User Group, January 2017<sup>73</sup>

Then, in June 2017, the chairperson of the board, Ngubane, resigned and the acting CEO, Matshele Koko, was suspended in July 2017 for awarding a lucrative contract to his stepdaughter. Shortly after, the CFO Anoj Singh, brought to Eskom by Molefe, was also suspended on corruption charges. Other senior officials have also been implicated and suspended. The utility is once again operating with an acting CEO and a new board. Indeed, what has become clear in all of this, is that the level of organised fraud and corruption uncovered by the public protector in her state of capture report is as endemic as reported to be. Parliament has thus ordered an inquiry into the alleged state capture of three of South Africa’s SOE’s all finding themselves in a similar scenario - Eskom, Trasnet and Denel - to commence in September 2017. Figure 6-9 summarises the major events of the ESI for the period 1994 to 2016. Note: 2012 was the last year Eskom provided its reserve margin to the public. Public reporting of the utility’s system performance, even in its annual financial statements, decreased as it entered a new cycle of blackouts from 2013.

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<sup>73</sup> Quote provided by P Vermeulen (City Power) during an interview 27 January 2017 who attended the meeting

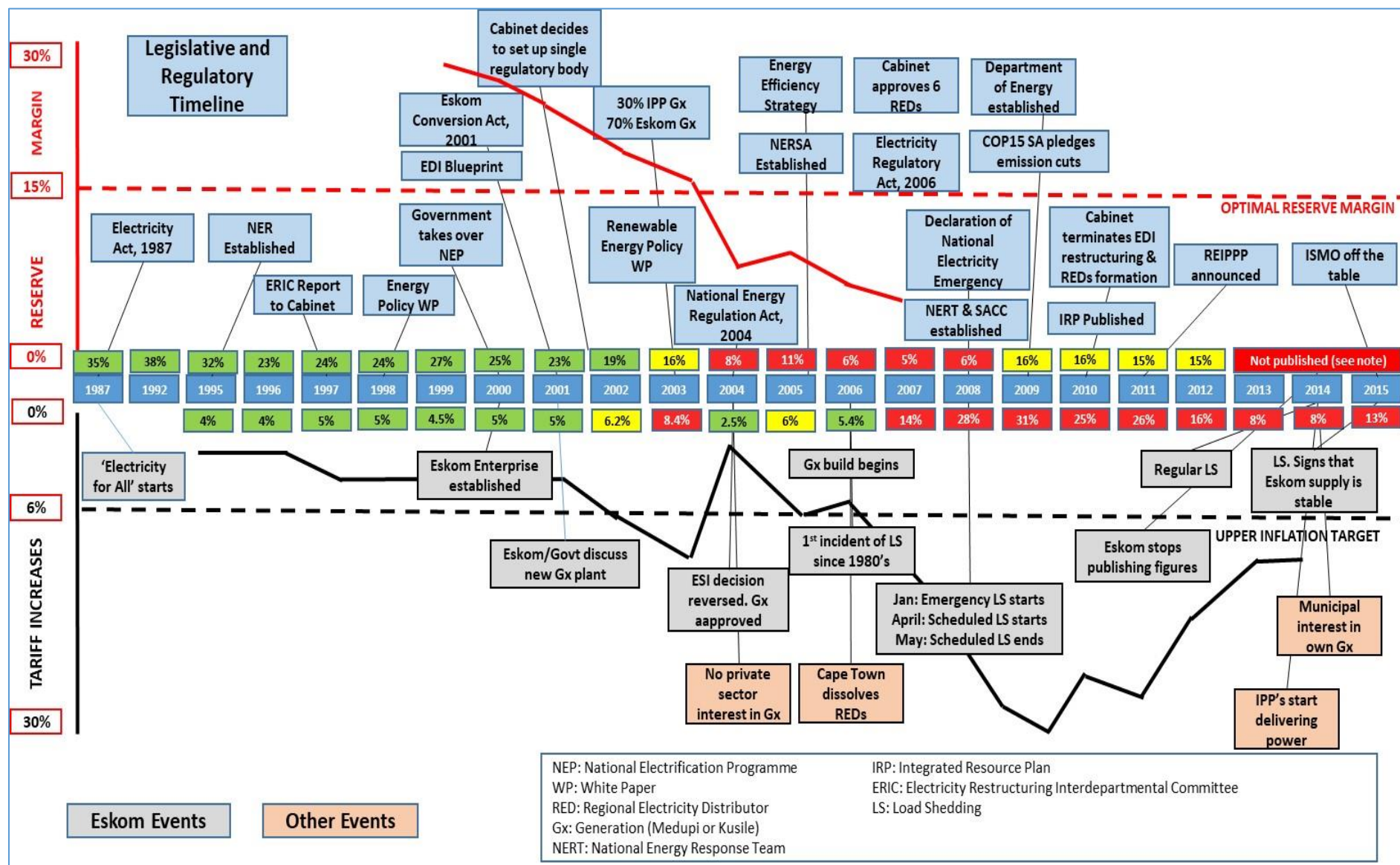


Figure 6-9: Timeline of Major ESI Events (1994 – 2015)



### 6.6.3 A Historical Institutional Perspective

#### Political and Economic Overview

After 46 years of overt domination by the NP - implemented through policy, regulation and force - one may have expected the ANC's immediate and outright rejection (displacement) of the institutional framework that was ultimately developed to support the apartheid system and which comprised a complex set of sub-systems. This was not the case however; and on closer inspection perhaps it is not completely unsurprising, especially when considering the maelstrom of competing interests and ideologies. Indeed, politically and economically, the ANC faced a herculean task when coming into power; dealing with both external and internal factors and priorities. Externally, what was once a liberation movement, now had to make the transition to political party and ultimately to ruling government, as a member of the GNU. Within this process, it also had to balance the need to revive a fragile and battered economy against meeting the expectations of an electorate that not only sought political, but also economic, redress. Of course, such a process by its very nature of being a constant 'balancing act', had to thus deal with the competing interests of the various members of the tri-partite alliance, which itself spanned a broad political spectrum. Internally, this resulted in ideological ructions within the alliance; and here it is also important to note that although the removal of formal apartheid was not in dispute, the real battle was being fought over the economic philosophy that underpinned it. A primary intention then of the GNU appears to have been the defence of vested economic interests, and quite possibly for the NP to use the opportunity while working with the ANC, to demonstrate and promote the merits of existing policy – indeed where necessary, to influence shifts to the now in vogue neo-liberal approach, which many 'centrists' within the ANC were embracing. This possibly made internal disputes more pronounced and debilitating; and even more difficult for the status quo to be displaced. The GNU's influence may also have been less impactful than this, especially since it lasted less than three years and given government's track record after its dissolution in 1997.

When examining the post-GNU period, it becomes clear that although government policy may have made bold transformative statements or gestures, more than anything, the limited change that has occurred since then, has been through layering. For example, employment equity and BBBEE at face value may seem nothing short of outright displacement; but the manner in which this was applied was not new. All that truly changed was that one priority group was replaced by another, creating a new set of elites – with little benefit passing through to the greater populace, as evidenced by the high levels of unemployment and inequality persisting since 1994. Likewise, grand plans to privatise SOE's amounted to little - by and large remaining firmly under government control - with the limited exception of Telkom (the state-owned telecommunications company, which was only partially privatised). Indeed, the structural weaknesses of the economy that the ANC inherited, not only remain, but have been put under even greater strain as policy continues seemingly along the same trajectory<sup>74</sup>. Ultimately, based on the review and analysis of the literature, changes to the political and economic environment appear to have been painfully incremental (here we exclude the removal of formal segregationist legislation and policy, which did occur under displacement).

The net effect of these developments, thus appears to be one of layering, where *new rules are being attached to existing ones*, but I would argue that layering has occurred at such a slow pace that it has

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<sup>74</sup> In reaching this conclusion, the research considered GEAR, ASGISA, the White Papers on Energy and Local Government, Industrial Policy and the more recent NDP, which to various degrees, have dealt with similar issues as discussed in this chapter and sought to rectify many of the key weaknesses identified by the researcher herein; but most of whom show signs of either being relatively unrealistic or inappropriate, or of having been compromised by inconsistent, uncoordinated and poor implementation



yielded to drift, where *external factors change and institutions do not respond to the changing social and economic environment, making institutions ineffective and eroding them to the point of obsolescence*. This is evidenced by a parastatal in varying states of crisis, a stagnant economy, growing inequality, the rise of populist politics and an electorate openly voicing its dissatisfaction in protest action and social media fury.

*“The ANC simply adopted existing government policy and deracialised them resulting in limited transformation and reform.”*  
Seekings & Nattrass (2015)

Applying the typology provides an additional mechanism to confirm this assertion. Mahoney and Thelen (pp. 24) explain symbionts, the change agent for drift, as *“actors [who] exploit an institution for private gain even as they depend on the existence and broad efficacy of the institution to achieve this gain.”* They elaborate, further explaining that institutional maintenance is neglected due to the gap between rules and practises for personal gain, which undermines the institution over the long run and contributes to its decline (pp 67). An accurate and apt assessment of the state of national government in 2018.

### Electricity Supply Industry

Within this overall political and socioeconomic context, Eskom has once again followed a somewhat different path through this milieu, for its own advantage; and it has been a story of two halves. In the first half, the early 1990s until 2000 or so, the utility’s primary objective was to *“keep government out of the boiler room”* which it ultimately achieved through careful planning.

In 1990, Eskom was by no means in a comfortable space; and although its operations and finances had begun to stabilise under Maree and McRae’s leadership, its future was far from certain. Also, meeting with the ANC without the NP’s approval was a bold, albeit dangerous, move that could have very easily backfired. Likewise, there was no guarantee that the ANC once it came into power would allow it the same level of independence. Operationally too, conditions were tough. After years of very low and negative economic growth, with similar projections for the foreseeable future, the utility inexplicably continued its power plant build programme (Chapter 6.5.2 – Phase IV), with the 4.1 GW Majuba power station commissioned in 1996, twelve years after construction began – a phenomenon of its by now decades old locked-in policy of continuous build. Indeed, Eskom was generating far more than it was selling – operating with a reserve margin of over 24% for a fifteen-year period (1982 to 1997), peaking at 38% for three consecutive years 1991 to 1993, ((Figure 6-9) Steyn (2003)). Another great challenge was electrifying the previously excluded majority of the population, which was a necessary but mammoth and expensive task, made more complex by the fact that a working relationship would have to be established with municipalities and their MEU’s, with whom Eskom always had a difficult, and mostly acrimonious, relationship.

To survive, Eskom switched from a positive to a negative feedback loop - *self-correcting mechanism vying for a stable condition* - a shift that was also being pushed for by national government, realising that not only was additional generation not required, it came at an unaffordable financial cost to the country. Eskom’s extended period under a positive feedback loop had finally amassed such ever-increasing powers, that if left unchecked, it would overwhelm the entire political system (Knapp, 2007 – Chapter 2.3.1). A counter-balancing negative feedback loop was needed. Reform. Thus, in addition to announcing a moratorium on new power stations, government issued the 1998 Energy White Paper, which made neo-liberal policy pronouncements, including its intention to involve the private sector to restructure Eskom into separate generation and transmission companies. Eskom countered these threats by delivering –

driving electrification and employment equity, keeping electricity tariffs low and generating large profits. Simultaneously, its overtures (negative) to potential investors, which were tacitly reinforced by the lack of decisive action from government and coupled with trade unions' active and vocal opposition to private sector partnerships, resulted in little investment interest from the private sector. Eskom remained intact and in just over a decade had successfully reinvented itself; reclaiming its prime position of jewel in the country's crown by winning international awards. The tale of the first half had ended surprisingly well.

The second half, from 2000, was a very different story. It saw the exit of the old guard, normal in terms of institutional evolution; had the requisite knowledge-transfer occurred. Unfortunately, it did not (Styan 2015; Jaglin & DuBresson 2016); and for the first time in its chequered history, the distinctive technical competence that the utility always enjoyed, was now eroded over a relatively short period of time by the rapid exit of experienced, competent personnel; replaced by politically subservient appointees, as highlighted by the short tenures of those holding key leadership positions<sup>75</sup> and multiple corruption scandals that have plagued the utility, (as detailed above in *Eskom in Crisis Again*). The high level of autonomy and independence that Eskom historically always operated under, was now also lost, as its relationship with national government had now become one of definitive subordination, in what is tantamount to "government boiler room capture"; the extent of which was first raised by the Public Protector's 2016 *State of Capture* Report, followed by Eberhard's and Godinho's *Eskom Inquiry Reference Book* and of course the ongoing Parliamentary Inquiry into Eskom. Thus, what is evident is a two-pronged assault on Eskom's operational capability – in a near debilitating combination of lack of leadership and loss of technical expertise. It laboured under a sustained and disastrous series of senior and key leadership appointments that weakened corporate and strategic governance, while simultaneously facing the exodus (or decline in morale) of experienced and competent technical staff, who themselves were replaced by new or insufficiently experienced personnel, thus further weakening the utility. This decline of Eskom, its impact on the national economy and the cost to the fiscus has been presented in detail above, defined by: rolling blackouts from 2005 becoming a daily occurrence for extended periods in 2008 and 2014, and the country in 2017 continuing to operate with the uncertainty that they may return at any time; leadership instability; high levels of large scale corruption; regular and significantly above-inflation tariff increases from 2008, needed to fund poor management decisions, a bloated workforce, corruption and massive cost overruns of the new power plants – with these events ultimately leading to the parliamentary inquiry which commenced in 2017.

When viewed through the theoretical prism, these outcomes strongly suggest *conversion*, where *rules remain the same, but are interpreted and enacted in new ways under changing external conditions, to serve new ends*. And as per the typology, these change agents being opportunists who "*exploit whatever possibilities exist within the prevailing system to achieve their ends*." (pp. 27)

## 6.7 Chapter Comments and Findings

Insofar that countries are unique and follow their own developmental path, similarities exist; allowing for broad generalisations to be made. South Africa's three characteristics of a large indigenous population, a sizable European settler population and huge mineral wealth, distinguished it from other resource rich countries who only had combinations of these. And although minerals were discovered prior to the formation of the Union of South Africa (1910), when the British formally exited the scene, their influence

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<sup>75</sup> Six different chairperson's of the Board between 2005 and 2017 and ten CEO's between 2010 and 2017

on political and economic structure endured. Three distinct periods, each one controlled by one of the three ethnic groups, have been identified in this chapter: In the period up to 1948 it was the English-speaking white population; the second period (1948 – 1994) saw Afrikaner nationalism dominate under apartheid; and from 1994 the indigenous population took control of government. Here the research findings suggest that the ruling group have never enjoyed total control, as one or both groups not in power could not be completely side-lined; with a key consequence being that the incumbent ruling group, more often than not, adapted existing, as opposed to developing new, policies to prioritise its electorate and interests. This has seen policies and structural frameworks survive; with little, or isolated, true reform being introduced. It is possibly for this reason, and because of the stranglehold (although waning) of the MEC on the economy, that the way “things are done” in South Africa has undergone little transformation. Several systemic weaknesses have repeatedly surfaced over the decades; but the responses or solutions to address these - regardless of the ethnic or race group in control of government - have in most cases been superficial. Table 6-14 illustrates how recurring issues present themselves and resurface over time.

Table 6-14: Summary of Findings of South Africa’s Political Economy (1910 – 2017)

1910-1948	1948-1994	1994-2016
Symbolized by: “Randlords”	“Afrikaner Nationalism”	“Black Elites”
<b>Labour</b>		
<ul style="list-style-type: none"> <li>White labour represented by labour unions. Semi and skilled labour reserved for whites only. Challenge to white labour resulted in a shift to conservative government in 1926 who introduced ‘civilised labour’</li> <li>Capital and even state sought to circumvent policy by training Africans</li> <li>Economy restrained by skills shortages</li> </ul>	<ul style="list-style-type: none"> <li>Entrenchment of pro-white labour policies for the Afrikaans populace through job reservations</li> <li>Increased mining mechanisation a move to contain wage costs and disruptions</li> <li>Agricultural and mining model of low wages and labour exploitation transferred to industrial sector (unsuccessfully)</li> <li>Economy restrained by skills shortages</li> </ul>	<ul style="list-style-type: none"> <li>Employment equity and BEE to address misalignment of the labour market</li> <li>Black unions align to political parties to influence policy. ‘Decent jobs’ official mantra with policy of wage protection over job creation</li> <li>Unemployment rises from 20% in early 1990s to 25% in 2014</li> <li>Economy restrained by skills shortages</li> </ul>
<p><b>Finding:</b> For well over one hundred years, government labour policy has favoured one racial or cultural group over another. Noting that under apartheid this practise was exclusionary and indefensible, whereas under the democratic government necessary and morally appropriate but to a large extent inappropriately implemented and manipulated (see BBEE Chapter 5.6.2). As a result, the country has always created elites (often undeserving) at the expense of the broader population and excludes full economic participation.</p> <p>Another enduring, and confounding, policy priority is targetting a ‘high wage – high productivity’ under a Porterian model, over a labour intensive one (Nattrass, Seekings, 2015). This excludes the majority, while the continuous upliftment of skilled workers widens inequality. Skill shortages are, and continue to be, a weakness of the labour market</p>		
<b>Industrialization</b>		
<ul style="list-style-type: none"> <li>Mineral wealth recognised as a ‘wasting asset’, necessitating the need to develop a viable secondary sector</li> <li>Government embarks on creating an enabling environment for this through Escom, Iscor, IDC etc.</li> <li>Industry is supported by import substitution and trade tariffs</li> </ul>	<ul style="list-style-type: none"> <li>Decentralization, supported by incentives, to create economic activity in rural areas, with limited results as firms are unable to operate profitably without subsidies</li> <li>Government report recommends a switch from import substitution to export orientation</li> </ul>	<ul style="list-style-type: none"> <li>Signatory to the World Trade Organization means trade liberalization and tariff removal</li> <li>Some winners but most companies unable to compete without trade protection. Situation exasperated by Indian and Chinese manufacturing</li> </ul>
<p><b>Finding:</b> South Africa’s industrialization is inextricably linked to the MEC, while non-MEC production is largely uncompetitive, with limited scope for exports. The removal of tariffs demonstrated just how reliant firms had become on tariffs. Government’s unequal protection of categories within sectors was demonstrated by the way in which trade liberalization tariffs were implemented, which increased protection for many but not all (McCarthy, 2003: p. 170). South African manufacturing is not self-</p>		

reliant and imports capital equipment, which is greater than exports and a net drain on foreign exchange. The small size of the market and selective government support of certain industries has led to an oligopolistic market structure		
<b>Current Account Deficit</b>		
<b>Finding:</b> In all three periods, the economy has relied on inward foreign investments to balance its foreign exchange requirements (37% of the current account deficit between 2003 and 2014 (Strauss, 2015)), creating regular flashpoints and destabilising the economy when investors withdraw large amount of money on short notice. Mining, and less so agriculture, are the country's bedrock of net foreign exchange inflows. The current account deficit in 2015 was 5.4% and 4.4% of GDP in 2014 and 2015, and averaged 4.11% of GDP for the period 2005 to 2015 (World Bank). The foreign exchange inflows fluctuate due to the cyclical nature of commodity prices, but ultimately their contribution is diminishing		
<b>Electricity</b>		
All generation, transmission and distribution brought under state control. MEU's cannot supply users (>25kVA) in their area of jurisdiction	Escom starts a massive new build programme. Tariffs rise sharply to fund capital expenditure; and government intervenes after industry protests	Energy white paper (1998) calls for reform and competition. Programme stalls due to labour protest and lack of government commitment
<b>Finding:</b> Eskom controls the ESI and taking control of municipal EDI is not inconceivable, having threatened to cut off defaulting municipalities and take over their operations. Its policy, supported by national government, of using residential sales to subsidise commercial and industrial tariffs aligns with developed country models, which is contrary to developing country practises. In 2011, industry and mines accounted for 77% of sales but generated only 67% of revenue (Thopil, Pouris, 2013)		
<b>Path Dependent Mechanisms</b>		
<b>Economy:</b> A young country shifts from an agrarian to a mining economy, to exploit its resources. Inevitably, the <i>multiplier effect</i> of the positive feedback loop locks economic development to the MEC. <b>ESI:</b> VFTPC, and then Escom, must generate new & large quantities of power for the mines, pursued through economies of scale. The <i>multiplier effect</i> kicks off Escom's long term <i>modus operandi</i> of continuous build – Positive feedback loop.	<b>Economy:</b> Economic growth during the first period emboldens unsustainable policy – positive feedback loop. The economy suffers from international & national pressure. Government responds by attempting to maintain equilibrium – Negative feedback loop. <b>ESI:</b> With continuous build now entrenched in its psyche, it's business as usual for Escom; doing whatever is needed to grow its generation capacity – Positive feedback loop.	<b>Economy:</b> The economy has changed little since 1994. Globalisation has exposed structural inefficiencies and an uncompetitive economy - evidenced by low growth, high unemployment and inequality. Reform & innovation exists in small measure, as stasis dominates to maintain equilibrium; in a classic illustration of a negative feedback loop <b>ESI:</b> Reform avoided through poor implementation Eskom's influence, and labour. From 2000, incessant political interference led to decline, inefficiency and corruption – Positive feedback loop.

When looking at the developmental trajectory over the three time periods, mineral wealth being used to industrialise, is not in question. It was. What is in question is the path it followed, and continues to follow, which has always delivered sub-optimal growth, as well as political instability and entrenched inequality. During all three periods, government policy has always excessively favoured a narrow segment of the ruling group's constituents, creating a small cluster of elites and increasing both the levels, and absolute numbers, of inequality - with the broader African population bearing the brunt. Also, vain attempts to stimulate the economy through the implementation of internationally prescribed models, often, have had opposite effects. Standard economic theory, for example, for low industrialization and high unemployment, ascribes the remedy of a labour-intensive growth path as per Arthur Lewis' *Economic Development with Unlimited Supplies of Labour*. Industrialised nations with low unemployment, focus on improving productivity, as per Michael Porter's *Competitive Advantage of Nations*. But little theory exists on South African circumstances, which are once again unique: an industrialised country with high unemployment (Nattrass & Seekings 2015). Seen in this light, it is perhaps time for a new multifaceted approach, borne of and in tune with local circumstances. Here, the fundamental restructuring of Eskom that its current quagmire necessitates, may very well provide the insights to do so – as both a microcosm and key driver of the South African political economy – were the political will to do so exist. This has not, for over a century and counting.

Ultimately these circumstances have created fertile breeding ground for Escom to pursue its own ambitions under the guise of serving these priorities, albeit that the former were sometimes counter to

the country's overall wellbeing. And these ambitions were totally clear – absolute dominance of the electricity sector by means of a build programme aimed at creating large economies of scale. However, this single minded quest to control all electricity markets, meant that Eskom's expansion plans prioritised market control, often at the expense of an appropriate and economically viable build plan that considered the national economy, regardless of whether it was SAR's reluctance to rely on municipal electricity supplies, mining and industrial expansion as a government imperative or the need to electrify the hitherto unserved, which offered a credible excuse. Indeed, with national government as tacit 'big brother' from the start – beginning with the influence to essentially veto expanded municipal power generation – Escom/Eskom maximised the leverage that this 'special relationship' afforded it, to the detriment of both private and municipal power generation. Ironically, this has led to precisely the kind of monopoly that the country's original electricity legislation actually sought to forestall – the unintended consequence of which a century later, is a nation almost wholly reliant on a by now teetering monolith where entrenched behaviours, locked in trajectories, long-established path dependencies, and the same original unwillingness to move away from total control of the ESI, have never really shifted, even when there has been government intervention a la commissions of enquiry and white papers. Indeed, through a process mostly of conversion, the utility has continually sought to create an ingrained monopolistic reality, the scale of which poses a genuine threat to the economic health of the country and the wellbeing of its citizens – be it sanctioning the CDF in the 1970s to allow it to build more power stations; high tariff increases in the 1970s and from 2006 to cover funding shortfalls and operational inefficiencies. Government backed loans increased from R174 billion (2011) to over R300 billion in 2017. Equivalent to 8% of GDP, with plans for an additional R340 billion by 2022, this prompted global economists and the international investment bank Goldman Sachs to state that Eskom posed the biggest risk to the South African economy (Bloomberg, 2017).

More than anything, research in this chapter has sought to demonstrate the extent to which politics, the economy, government and the ESI (inclusive of EDI) are inextricably linked. Indeed, the complexities are of such magnitude, that any attempted changes to EDI which are anything more than superficial, cannot be considered in isolation. Thus, with the national ESI environment and framework now painted as a clear contextual picture, the next chapter focuses on the primary research topic – municipal ESI.

## 7. Municipal Electricity Undertakings and Local Government

### 7.1 Objectives and Structure of the Chapter

Previous chapters identified the municipal ESI institutional stakeholders and explained why MEU's were constantly "under siege" from their political masters (at local, provincial and national level), as well as the dominant national utility at particular times - VFTPC to begin with and then Eskom. This chapter now demonstrates how this ultimately played out – retaining the now familiar structure. It identifies the political, technical and financial obstructions that the above-mentioned institutions placed in MEU's way, the latter's response and the outcomes. Here it should be noted that in all of this, MEU's as operating entities also had to deal with everyday trading conditions and normal operational necessities - technology changes, economic ups and downturns, staff competency and many others. These are also considered in this chapter, using Johannesburg as a case study. This allows for a detailed account of how broader decisions manifested at a specific MEU – especially since it is the one that services the country's financial centre and biggest city.

Stylistically, the research presented under each of the time periods is anchored around the primary theme affecting the municipal ESI at the time. From 1910 until 1948 for example, it was the relief of rates; from 1948 until 1994 it was the Escom battle for rights of supply; and in the final period (from 1994) the challenge of providing electricity for all. Of course, other pertinent matters in each time period are also addressed.

### 7.2 Historical Backdrop – Up to and Including Union (1910)

With the exception of Johannesburg and Kimberly, numerous attempts to establish municipal government in the interior between 1850 and 1900 failed; such as in Potchefstroom, Pretoria, Lydenburg, Rustenburg, which Green (1957) attributed to a lack of financial viability. Towns still required the provision of services however, and the first appointments of a town or municipal engineer were made in 1850's. The non-permanent nature of the municipalities meant that the engineering positions were on a temporary or part time basis, except for Kimberly and Johannesburg where the discovery of diamonds (1870's) and gold (1880s) made municipal government viable. It was under British control that municipalities were formally established across the Transvaal, most of which came into existence in 1903. During this period, the town engineer was responsible for all public works under municipal governance. Depending on the size of the town, engineers for water, sewerage and electricity, all of whom would report to the municipal engineer were also employed (Mäki 2013). Most of the early engineers were trained via the apprenticeship system.

The Cape Electric Light and Telephone Company was formed in 1879 and the country's first electric lighting appeared in Cape Town's railway station in 1881, which was extended to Table Bay Harbour by 1882. The same company successfully tendered to Kimberley's Town Council for street lighting and in 1882 Kimberley became the first town to have electric street lighting and a municipal electricity undertaking. From there, the demand for electricity grew across the country, summarised by the Association of Municipal Electricity Undertaking (AMEU) 80 Years Handbook (1995) as follows. – *"Durban Town Hall was illuminated in 1888, Pietermaritzburg got its first lights in 1897. Johannesburg built its first generating plant in 1891 by the Johannesburg Lighting Company but taken over by the 'Gezonondheid Komitee' in*

*1895. A similar chain of events occurred in Bloemfontein where electricity was first supplied in 1900, during the Boer war meaning that the plant was under military control and only handed over to the municipality when the war ended. By the turn of the century most independent electricity generation plants, for one reason or another, had been taken over by the local municipalities. The result was that municipalities generated most of their electricity. A practise which endured for many years". (AMEU 1995)*

## 7.3 The Union of South Africa (1910 – 1948)

### 7.3.1 Municipal Finances and the Policy of Rate Relief from MEU Revenue

Provincial government was mandated to create local authorities and controlled them via ordinances, which is why local government functions varied across provinces. The newly formed South African government borrowed greatly from the British structure. This was true for local government as well, with one difference. Local government in South Africa was not responsible for, and played a very limited role in, the provision of social services, such as health and education. Social services resided with provincial government. From the start (1910) municipal financial self-sufficiency was strictly enforced, regardless of pressure placed on municipalities, such as natural population growth and urbanization. By illustration, in 1937 Johannesburg had balanced its municipal budget consistently since Union, without any contribution from central or national government (Maud 1938, p.290), and 68 years after Union the national average of central government grants to municipalities was just 4.7% of total revenue (Solomon 1983, p.58). Trading services, such as electricity and water, were allocated to local government and the surpluses generated from the charges, and property rates, became the two major revenue sources.

Services provided by municipalities could be broken down into two categories. The first were pure public goods, which are non-excludable and non-rivalrous. This means that individuals cannot be effectively excluded from their use and the use by one individual does not reduce availability to others. Classic examples include street lighting, national defence, footpaths and flood control. The second category, quasi-private goods, was for services that could be charged for based on consumption - units of electricity, litres of water, cubic feet of gas, kilometres travelled etc. Quasi-private goods have characteristics of both private and public goods (Chapter 3.5.3).

It was a requirement that major cities provide their allocated functions, regardless of whether they could do so at a profit. Many were provided for free or only charged a nominal fee, such as libraries, museums, public swimming pools and sport facilities. Transport was almost always operated at a loss. Conversely, the provision of electricity, water and gas were profitable undertakings. The limited availability of gas in South Africa, with water being viewed as a basic and fundamental right, meant that the bulk of the trading surpluses were generated from the sale of electricity. In the early 1940s, based on gross receipts, fees from trading services accounted for almost 60% of total income, while property taxes contributed 25% and the remainder (~15%) was from other sources (Holmes & Cowden 1949, 123–124). These figures differ somewhat with (Maud 1938), whose figures for the period 1903 to 1935, shown in five year increments, are presented below in Table 7-1. A few things become immediately clear. The first is the ever-increasing value and contribution of electricity to total revenue, reflecting the rapid uptake. The second is the flat, even decreasing, contribution that property rates made to municipal revenue. During the period the contribution from rates more than halved from 39% of the total in 1905 to just 16% in 1934, while total municipal revenue almost tripled from £1.3m to £3.7m. This was only possible because of the increased contributions made by trading services.

Table 7-1: Contribution to Total Municipal Revenue (£) for Johannesburg by Category (1905-1934)

Year / Percentage Contribution	Property Rates	Other Non- Trading	Electricity (Trading)	Other Trading <sup>76</sup>	Total Revenue
1905	525,312	362 409	143 533	311 376	1 339 630
% of Total Revenue	39%	27%	11%	23%	
1909	303,442	290 741	222 023	755 443	1 571 649
% of Total Revenue	19%	19%	14%	48%	
1914	348 958	286 565	281 136	663 198	1 579 857
% of Total Revenue	22%	18%	18%	42%	
1919	443 582	401 751	394 149	935 918	2 175 400
% of Total Revenue	20%	19%	18%	43%	
1924	484 794	545 092	490 127	1 037 356	2 557 369
% of Total Revenue	19%	21%	19%	41%	
1929	627 314	783 114	683 609	1 913 718	3 934 726
% of Total Revenue	16%	18%	17%	49%	
1934	614 987	931 674	867 560	1 380 361	3 764 918
% of Total Revenue	16%	25%	23%	37%	

*Source:* Maud (1938)

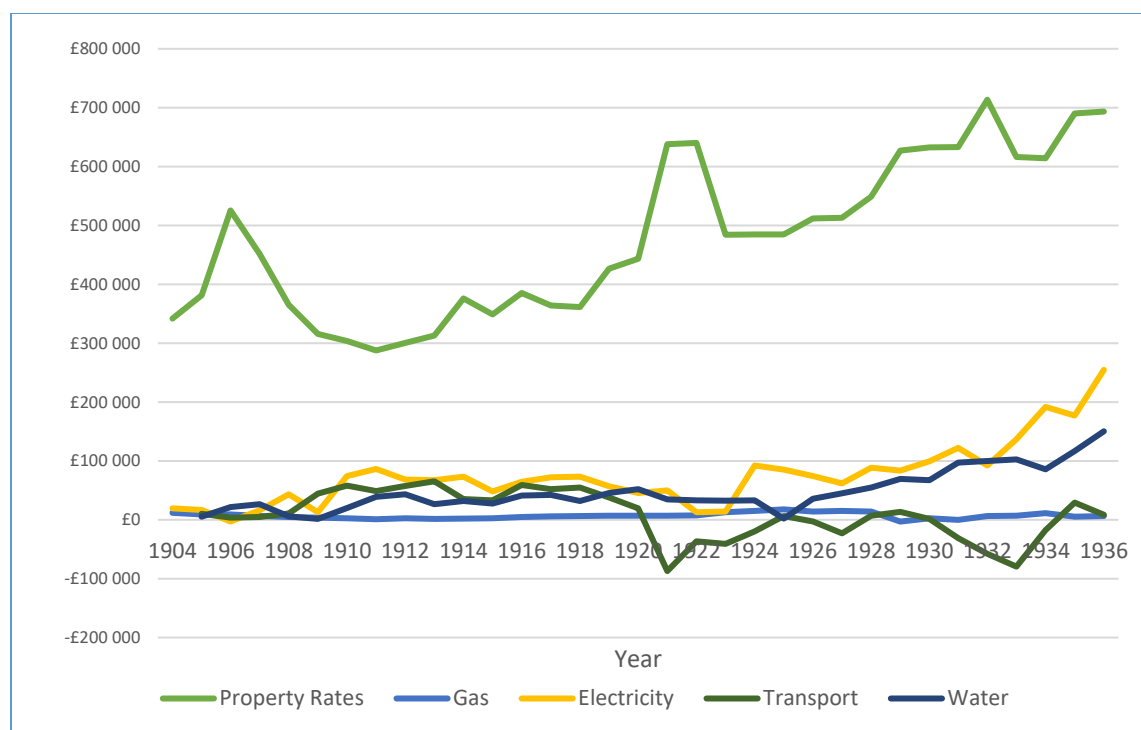
A more telling number however is the actual surplus, as a large revenue contribution could be offset by a similar, or even bigger, net expense which often was for transport. By comparing property rates to the surpluses from trading undertakings, Figure 7-1 shows the extent and the speed with which the Johannesburg municipality started using contributions from services to subsidise property taxes, pursuing an indirect over direct taxation policy. During this period, indirect taxes peaked in 1935 and contributed as much as 77% of the municipality's total revenue. Revenue from rates, consequently, did not increase materially. £341 972 was collected in 1903, when the population was 109 000, increasing to £587 511 in 1935 when the population had grown to 438 000 (Maud 1938, pp.289–292). Figure 7-1 shows that electricity and water became the main municipal revenue contributors. Property ratepayers also benefitted from the city preferring to impose special rates for specific purposes, (such as road levy, water main extensions and for the tram), rather than increase property rates. Figure 7-1 may also demonstrate the uncertainty and difficulty associated with property tax collections. Annual increases or decreases of over £100 000 were not uncommon, as can be seen, and this cannot be explained by the policy of keeping rates as low as possible. Electricity and water provided far more reliable revenue sources, where disconnection for non-payment is relatively straightforward.

The percentage net profit from trading undertakings could vary wildly. For example, electricity made a loss of 21% in 1907, but just three years later it registered a 63%<sup>77</sup> net profit. This perhaps is understandable in the early years where large infrastructure investments were necessary and proved very profitable, except for transport. Over a 30-year period, the net profit from gas averaged 23%, Electricity 22%, Transport 5%, and Water 19%. (Derived Maud 1938).

<sup>76</sup> As the total surplus made by abattoirs and the produce market was relatively small, £36 062 and £72 954 respectively over 30 years, these have been omitted from the figure.

<sup>77</sup> Surplus / Shortfall as a percentage of expenses





**Source:** (Maud 1938) Randall (1938)

Figure 7-1: Annual Property Tax Collections versus Contributions from Trading Undertakings in Aid of Rates for Johannesburg Municipality (1904-1936)

Table 7-2 illustrates the extent to which, and how quickly, ratepayers were trading surpluses. General rates and road rate charged by the city decreased, while capital expenditure increased substantially, thus a constantly increasing part of the burden was borne by the trading departments (Randall 1938, p.412)

Table 7-2: Contribution of Municipal Undertakings to the Relief of Rates for Johannesburg (1925-1937)

Year Ended 30 June	Net Contribution by Trading Departments £ (000)	Rates £ (000)	Total Revenue £ (000)	Net Contribution by Trading Departments to Rates %
1925	91	485	729	18.8
1926	107	512	773	20.9
1927	129	513	829	25.1
1928	161	549	890	29.3
1929	183	627	1 005	29.2
1930	193	632	1 019	30.5
1931	158	633	1 044	25.0
1932	183	713	1 206	25.7
1933	222	616	1 217	36.0
1934	256	613	1 132	41.8
1935	415	690	1 325	60.1
1936	390	693	1 264	56.3
1937	395	706	1 332	55.9

**Source:** Randall (1938, p.411)

Randall (1938, 410–411) was very critical of the city's practise, which was nothing less than a tax, and not a "good one", as it was *"inequitable and disguised, but probably recommends itself partly because the bulk of the citizens do not realize that they are being taxed, and therefore do not object"*. The paper goes on to warn against keeping rates as low as possible by pushing the profits from the trading undertakings as high as possible. It was viewed as unsustainable and that the policy needed to be reversed. A more equitable distribution, through higher rates, could not be reasonably challenged by rate payers. A 1935 Commission of Inquiry which reported on municipal power stations stated:

*"...the profits of the electricity department..., allocated in relief of rates, unduly favour the ratepayers at the expense of the consumers. They are unreasonable from the point of view of the users of electricity, and uneconomic from the point of view of industrial and general development of the city."* (Maud 1938, p.114)

Relief of rates was not unique to Johannesburg and was practised by all municipalities. The question arising, is why it was pursued to the extent that it was? Certainly, part of the answer is, as Randall notes, that the users of services were exploited. However, there was strong political will to retain this practise, which prevails in present day 2017. This research posits, that this was yet another practise inherited from the British system of government, which became entrenched even though the British removed it in 1947, because of the autocratic structural governance framework. Through provincial government, national government continually allocated new functions to municipalities with little or no additional financial support, while not allowing them to generate additional revenue. From a municipal perspective, the ability to self-fund gave them a semblance of decentralised government and the benefits (as detailed in Chapter 3) that accrue with it.

Chandler (2007, 70–97) explains Britain's complicated system of local government from 1800, designed to benefit the industrial and commercial elite, comprising the majority of councillors and alderman – a situation which did not change materially after the passing of the 1835 Municipal Corporations Act, also known as the Reform Act. The objective of the Act was to reform boroughs which were run on party lines and offered little to the local population. Under the Act, a uniform system of government was established for 178 out of the 246 towns (Craythorne 1977, p.6) and large towns were required to disband their closed corporations and set up new councils based on rate payer elections. The effect was that the interests of landowners were now merged with those of industrialists, while improvements in terms of services for the local population came gradually, as more and more services came under the control of municipalities. Limited reform during the first forty years was replaced by the *"golden age of municipal government that culminated by the end of the century in the established municipality subsidising the rates through profitable trading services and spearheading major infrastructure developments"* (Chandler 2007, p.76), which ceased with the passing of the Electricity Act of 1947. The improved services in the cities led to large scale urbanization, and by 1901, 79 percent of the population were in urban areas, compared to 54 percent in 1851. The 1884 Electoral Reform Act gave all male households in rural areas the right to vote in parliamentary elections. This was followed by municipal reform in 1888, when the local voting was extended to tenants of rooms or of land valued at more than £10 per year (Chandler 2007, pp.96–100).

In South Africa, the right to vote in national elections was limited to white males only, and even greater limitations were placed on municipal elections. This right was highly prized and the failure of a qualified voter to exercise it, was viewed as a breach of civil duty; with authorities printing the list of delinquent

voters in the local papers. In the Transvaal, Ordinance Number 8 of 1912 (repealed by Ordinance Number 2 of 1914) required a “property qualification” for voters. A report by the Report of the Local Government Commission of 1921 called for this ordinance to be re-established, as “*only responsible citizens with a real stake in the municipality should be entrusted the franchise*” (Cloete 1978, 119–123). The recommendation was not adopted but illustrates two things. The first is that the British system was replicated in South Africa, and consequently, the second is the privilege and power that property owners enjoyed. The Cape Province kept the municipal voters roll limited to property owners for a much longer period, until as late as the 1950s<sup>78</sup>. Thus, in addition to surplus revenue from undertakings, users were being charged a tax they were not aware of. This arrangement was also in the councillor’s interest as minimising property taxes would ensure the support of the electorate. The practise continued even when the vote was extended to all white citizens, as property owners were likely to carry the greatest influence and provide financial support to political parties.

### 7.3.2 The AMEU and the Policy of Rate Relief from MEU Revenue

#### Contextual Background

The policy of rate relief from municipal undertakings did not enjoy universal local government support. Many were against it, not least of which were the electricity undertakings, whose operations were undoubtedly making the biggest contribution to the relief of rates. The topic was first raised as early as the second AMEU<sup>79</sup> convention in 1917, and came up regularly for discussion thereafter – 1927, 1929, 1935, and 1936. The issues raised at each convention centred around concerns of what was believed to be the unsound policy of allocating “net surplus profits” from electricity undertakings for the relief of rates; and all the issues raised are included in the 1937 paper outlined in the next section. Indeed, by 1937 the AMEU had succeeded in drafting a policy recommendation for the provincial administrators to consider, with the objective of inspiring legislation that placed a limit on this practice. In its original form, the recommendation was based on the United Kingdom’s Electricity Act of 1926, but after a heated debate the proposal was watered down significantly. As it turned out, the recommendation only made it to the administrator of the Cape Province, and promptly postponed when the municipality itself objected.

The topic of relief of rates was consuming an inordinate amount of time at annual AMEU conventions in the build-up to the 1937 policy paper, with highly charged discussions having to be ended by the chairman, and always with no mutually agreed outcome. Typically, but not always, the MEU delegates opposed the practise, whereas municipal councillors’ interests lay in appeasing their voters, who did not want to see their property taxes rise. It was therefore decided at the 1936 convention that the AMEU needed to adopt a formal position at its next convention. The next section now provides a summary of the AMEU’s executive committee’s rationale for opposing the practise of relief of rates, followed by responses received from delegates, both for and against the practise.

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<sup>78</sup> Based on an interview with Richard Frantz. Previous CEO and director of Merz and McLellan, whose father was a municipal manager in Cape Town in the 1940s and 1950s.

<sup>79</sup> Although the majority of the delegates at the conventions were electrical engineers, councillors and mayors were well represented and stayed for the full conference. These delegates represented different constituencies which mostly, but not always, led to the differing views. By the 1960s, as travel became more accessible and other issues were of greater priority, fewer mayors and councillors attended and generally only for keynote addresses.

## Summary of the AMEU Paper Presented at the 1937 AMEU Conference Analysing the Policy of Rate Relief and Outlining its Position

The paper, prepared and presented by Councillor James, addressed the topic by breaking it down into themes, each of which then consider the advantages and disadvantages of the practise. To maintain the integrity of the paper, the below precis maintains the original format and then concludes by detailing the various responses put forward by the delegates.

### **General Considerations**

From a MEU perspective, rate relief is defined as the act of literally using electricity undertakings to relieve ratepayers of the need to pay the full amount necessary to balance the general fund revenue for municipal services, by extracting lump sums from the electricity undertaking. It also includes the provision of public and inter-departmental electrical services at less than cost. Electricity is no longer a luxury only accessible to an affluent few, but has become a necessary requirement for the health and general well-being of a community. Similarly, for industrial activity to provide employment and economic well-being, it is a requirement that electricity supplies are made available to a virtually unlimited extent, at low cost. Alternatives to electricity do exist, but are generally less convenient and have a diminished security of supply. However, charging inflated prices to cover other expenditure raises the likelihood of a loss of a business. The objective of the electricity undertaking is to provide the service at the lowest possible cost and dividends are received intangibly through the increased valuation of the district served, and not necessarily in cash. Additionally, higher tariffs ignore the needs of the poorer sections of the community. Indeed, the inordinate temptation of “easy money” from electricity sales has prompted other countries to introduce legislation to control such action; making the AMEU’s 1937 attempt to embolden such legislation consistent with global practices.

### **Equity**

It is not equitable for electricity users to unwittingly contribute to total municipal expenses. The greater the usage, the greater the contribution. All ratepayers are not necessarily electricity consumers, but all electricity consumers are ratepayers, either as owners of property or through the rent that they pay. Ratepayers may own large tracts of land using no electricity, whereas a family must pay rates and electricity. It is thus unsurprising that owners of large rental properties and undeveloped land stand to gain the most from, and are the most ardent supporters of, the policy. A figure of 14.5% is quoted as a real case example of the contribution towards the relief of rates. In other words, the price of electricity is 14.5% more expensive than it should be to pay for other municipal enterprises.

### **Financial Security**

Municipal reliance on revenue from electricity undertakings has become so convenient, that in certain instances the amount taken exceeded gross profit, resulting in a deficit being carried forward. This practise would undoubtedly put future development of the undertaking at risk; and in extreme cases risk the undertaking itself. This was either due to councillors not understanding the consequences or because they had so little regard for the undertakings. The relief of rates is only possible when there is a surplus, which is a true one – after allowance has been made for external charges, such as redemption, interest on loans and most importantly depreciation and obsolescence of plant and equipment, which are often overlooked

or subject to variation on personal opinion. It is the way that these three items are treated that makes such sizable amounts available for the relief of rates.

Electricity undertakings operate in a rapidly changing environment, where improved technology is constantly introduced. This could lead to equipment having to be replaced during its working life, and undertakings must be financially prepared to do so. The transfer of money for rate relief rather than being put back into the business, leads to the situation where undertakings must enter into loans to finance new equipment and operations, adding interest costs and further necessitating tariff increases. This practise is akin to raising loans indirectly for the relief of rates, whose legality is questionable. Here, additional minor arguments for ratepayer relief include that on account of ratepayers effectively standing as guarantors, loans are secured at a lower rate. This too is refuted by the AMEU executive on the basis that it is in the ratepayers' interest and that financial institutions are already very willing to loan funds to electricity undertakings.

### **Rewards to Ratepayers**

The relief of rates practise is supported by the argument that ratepayers are entitled to a return on their investment, as they ultimately stand as guarantors. The argument is rejected on the basis that the ratepayers are only liable for interest on the capital invested in the undertaking, which of course, benefits the district and in turn their investment. But even if it is accepted that the ratepayers as investors are entitled to a reward, it can be argued that their reward consists of them becoming owners of an asset for which they have not paid anything. This takes the form of the increased valuation of their properties due to the prosperity which the supply of electricity has brought. The advantages to ratepayers is maximised by supplying electricity at the lowest possible price and operating the undertakings in a prudent financial manner, rather than reducing monthly rate payments.

### **Legislation**

The problem of rate relief is not unique to South Africa. In England legislation in 1926 was introduced to place a limit on this practice. In New York, a proposal to aid rates from municipally owned electricity undertakings was rejected outright on the basis that it is the private sector's purpose to obtain profit. Public undertakings are created and operated for the well-being of the population, and although it is a requirement that they are properly managed, consumers must not pay a higher tariff to benefit ratepayers.

Turning to South Africa, the Electricity Act of 1922 requires Escom to regulate its charges at its various undertakings to operate at neither a profit nor a loss. Other licensees (notably VFTPC) were required to distribute 25 percent of their surplus profits to their consumers.

Although no legislation exists for municipal undertakings, a draft ordinance had been published in the Cape Provincial Gazette (19<sup>th</sup> May 1936)<sup>80</sup>. It allowed for a portion of net surplus revenue from electricity undertakings to be used for the relief of rates, but limited it to 1/20<sup>th</sup> of the total capital expenditure of the undertaking (same as Electricity Act of Great Britain 1926). Furthermore, if transfers are deemed excessive in the opinion of the Provincial Administrator, the Administrator could direct that no further contributions be made for a specified period thereafter without written consent.

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<sup>80</sup> The ordinance was postponed due to an objection by the City of Cape Town. The ordinance never came into effect.

## Conclusion

Relying on profits from undertakings for the relief of rates is a doubtful practise, as it is an unreliable form of taxation because profits vary from year to year. An overreliance on this revenue source is likely to create municipal funding problems if electricity sales or profits drop. Additionally, using electricity profits to fund unprofitable or risky municipal enterprises, discourages the enterprise itself from maximising profits. In conclusion, electricity undertakings should be run on business principles and the provision of services to the municipality itself should be at market rates and without subsidy. This principle should apply to municipal services undertakings, such as gas, water etc.

## Delegate Responses to the Official AMEU Position on the Policy of Rate Relief

The moderator then opened the session to the floor and Table 7-3 captures the essence of what where lengthy, polite, but pointed responses, in favour and against the practise. Two things can be surmised from the responses. The first, is that the delegates had very strong views on the subject, creating conflict. The second, is that a scan of the responses both from this conference and others (before and after) confirms that typically MEU delegates (technical) supported the removal of the practise and councillors (political) opposed its removal.

Table 7-3: Summary of Responses to the AMEU Executive Committee on the Policy of Rate Relief at the 1937 Conference

Municipality	Comment
<b>Support the Removal of Rate Relief from Municipal Electricity Undertaking Funds</b>	
East London	<ul style="list-style-type: none"> <li>-Practise equates to an indirect tax</li> <li>-As electricity undertakings are natural monopolies, they are exploiting their position</li> <li>-Concern that technological advances may more readily replace electricity if it is too expensive</li> <li>-Electricity profits for rate relief must be limited to a small percentage with consumers enjoying lower tariffs</li> </ul>
Johannesburg	<ul style="list-style-type: none"> <li>-A longstanding topic in Johannesburg and the views of the Town Council (politicians) do not coincide with that of their financial advisers and engineers</li> <li>-Ratepayers should receive relief subject to a limit, which should be "<i>somewhat higher</i>" than what the caps applied in other countries. Reserves for obsolescence should be maintained</li> <li>-Before appropriations are made, consideration should be given to the reasonableness of electricity tariffs</li> </ul>
Pretoria*	<ul style="list-style-type: none"> <li>-Does not encourage prudent accounting, such as provision for depreciation and obsolescence</li> <li>-Artificially high electricity tariffs harm a city's competitiveness</li> <li>-Experience from England shows that the practise was abused and necessitated legislation</li> <li>-Many councils have terminated the policy from other undertakings (gas, water). Why is it done for electricity?</li> <li>-The fact that the Electricity Act effectively nationalised the industry, is an admission that it is a public utility needed in modern life and therefore must be provided at lowest cost</li> </ul>
Krugersdorp	-Recognised the different interests of councils and engineers, but believes that profits should be returned to consumers or placed in a reserve or equalising fund
Cape Town	-Failure to match loan periods to the useful life of equipment is effectively raising loans for the relief of rates. Proper and prudent accounting is crucial
Port Elizabeth	-Larger electricity consumers do not benefit from the relief of rates i.e. surpluses do not accrue in a proportion that is related to the rateable value of the property
<b>Support the Policy of Rate Relief from Municipal Electricity Undertaking Funds</b>	
Bloemfontein	<ul style="list-style-type: none"> <li>-Eskom's efforts to curb municipal electricity undertaking profits have become an obsession</li> <li>-Municipalities are trading concerns which are required to provide functions and services. Some of these are unprofitable by their nature, but as they are vital and necessary, they are provided. By not using the funds available from profitable undertakings, the city is forced to raise loans or increase its taxes. Either way the consumer is in the same position, as a cheaper electricity tariff is offset by a higher tax rate. It is a vicious circle and what is given with the one hand is taken away by the other</li> </ul>
Pretoria	-Ratepayers stand as guarantors for the undertakings and rightly deserve a return

	<ul style="list-style-type: none"> <li>-Services lose money, break-even or make money; but they must be provided. It is sound financial logic to adopt a “swing and roundabouts” approach</li> <li>-If profits may not be used, ratepayers will refuse to pay higher rates for services operating at a loss</li> <li>-Sales are increasing despite the amounts charged for rate relief, suggesting that rates are not too high and do not hamper industrial progress</li> <li>-Electricity is no longer a luxury but a necessity and thus can be taxed. This has the overall effect of reducing direct taxes, such as income tax</li> <li>-Municipal undertakings do not pay taxes, yet use available infrastructure (roads, publicity etc.) Relief of rates is a way of contributing</li> </ul>
Stellenbosch	-The points advanced in the paper do not apply to municipalities who do not generate and take their supply from Escom. These towns also have limited prospects to attract industry, thus profits from electricity allows rates to be kept at a level which encourages new buildings, which expands the revenue base
Durban	<ul style="list-style-type: none"> <li>-It is municipal policy to maximise profits on electricity sales and use the proceeds for rate relief</li> <li>-Preventing the relief of rates from profits will only result in councillors finding another way to tax the electricity undertakings</li> <li>-Even though it is an indirect tax, it is very thinly disguised and must be exploited to the fullest</li> </ul>
<b>Neutral</b>	
Escom	<ul style="list-style-type: none"> <li>-Councillors and engineers should not be pitted against each other, as both should be working to achieve the same objective – the progression of the city and not their individual departments</li> <li>-Possibly too simplistic to state that what the one hand gives, the other takes away</li> <li>-Municipalities distribute surpluses to subsidise rates; only to take loans when there are shortfalls. Reserve accounts should be kept; these could be used to finance capital projects and called upon when needed</li> <li>-The impact on small, medium and large consumers must be considered</li> <li>-Undertakings must charge their municipalities on a cost or cost-plus percentage basis for own consumption</li> </ul>

*\*The delegate from Pretoria stated the arguments from both camps, but personally believed that the surplus towards rate relief should be limited to 2% percent of the outstanding debt of the undertaking per annum*

**Source:** (AMEU 1937, pp.77–106)

After robust and lengthy debate, consensus could still not be reached. The executive committee’s objective for a common position against the practise of relief of rates had to be abandoned; concluding that while it did not agree with many of the comments received, it could not proceed without a mandate. It was resolved that a sub-committee be formed to investigate and present their findings at the 1938 conference.

### How the Relief of Rates Debate Ended

Predictably, little changed and the sub-committee reported at the 1938 convention that a common position could not be agreed upon. The proceeding’s notes reflect the frustration and exasperation of all the delegates, to the extent that it was unanimously agreed to close the topic without any discussion. In 1939 the issue was raised once again by the councillor from Cradock who enquired about the status and whether any progress had been made. It was confirmed the sub-committee was not able to find a common position. Furthermore, municipalities had been hit hard by the de-rating Act and were now even more reliant on the revenue from municipal undertakings. Discussions scheduled between national, provincial and local government to address financial relations between the three were postponed indefinitely due to the outbreak of World War II. It was agreed that there would be no purpose in resuscitating the matter at the convention (AMEU 1939).

Due to the war, the next convention was held four years later in 1943. Here, a proposal to establish a Joint National Electricity Power Board was endorsed by the executive committee. The Board would be made up of all the municipal ESI participants to co-ordinate national efforts across the three tiers of government. The AMEU would have adequate representation through executive and advisory powers. The Board’s

objectives included: 1) Future planning for new generation; 2) Regulation of profits and relief of rates; and 3) Uniform policies of local supply regulations and interpretation of government legislation affecting the ESI. The response from the United Municipal Associations was not positive. The Orange Free State municipal association's response was that a channel to national government existed through the United Municipal Executive (UME) and would not want to create a new entity; and would not associate itself with the proposal. The AMEU was shocked with the strong response, but felt it was necessary to proceed. It was decided to resubmit a copy of the application, with reasons as to why the formation of the Board was being proposed, and to send copies to all members of the Municipal Executive (AMEU, 1945).

True to form, the topic was on the agenda for the 1945 convention and once again there was little to report. The AMEU president proposed that a more forceful approach be taken and that national government be approached directly. Councillor Eden from Cape Town took the floor to say that although he supported the views of the AMEU, he felt a different approach was needed. The real issue was the relationship between central and local government. Over the years, municipalities had been required to undertake additional functions, which they did not believe was their responsibility and received no additional income. Being so hard pressed for money, the municipal treasury was often forced to act in the way that it did. The situation deteriorated to the extent that the Institute of Municipal Treasurers and Accountants were preparing a report which was to be submitted to the Minister of Finance. Consequently, a meeting was held with the four provincial administrators and an overhaul of the municipal system was the expected outcome. Indeed, change was already taking place and Cape Town had instituted a system where the amount to be taken from the electricity undertaking's net profit account would be negotiated in advance. This practise was to be extended to the other service undertakings. The councillor recommended that the matter of the Joint Board not be pursued and that it would be better if it was dealt with internally, as Cape Town had done. The councillor's proposal was adopted (AMEU 1945).

A motion not to discuss relief of rates was raised in the 1946 AMEU Convention, to the surprise of some stalwarts who had carried the battle for so many years. The committee had come to realise that practise would not be reversed and decided to change their approach to "damage limitation". This entailed that a distinction had to be made between the AMEU opposing the policy and doing so in a financially responsible manner, which would not put the electricity undertakings at financial risk. A resolution was passed to convey this message to the UME (AMEU 1946). 1946 was the last year that *Relief of Rates* was on the proceedings agenda or discussed at an AMEU convention, with the focus for municipal undertakings quickly shifting to rights of supply, as will be detailed in the next section.

Amidst this climate and the ongoing challenges of municipal funding and finances, the UME (1944) through the Institute of Municipal Treasurers and Accountants prepared a memorandum for municipalities to receive financial relief from national government. Indeed, lack of progress, even prompted the Institute to suggest that the items raised be investigated by a Commission. Eventually the request did succeed in getting a response from government - a refusal. The Minister of Finance responded (1945), stating that the municipal claims be redefined according to specific principles, which he provided. The suggested principles were however unworkable as there were too many entrenched vested interests, and would require provinces to give up, or share, most of their revenue sources (Jenvey 1964, 147-148). Ultimately, any hope of changes to local government functions and the financing thereof ended when the ruling party lost the national elections in 1948 and the NP came into power.

From a historical institutionalist perspective, tracing and providing an accurate account of these events demonstrates how the now path dependent self-reinforcing practise of relief of rates rapidly entrenched



itself in a positive feedback loop whose benefits, a hidden tax, were of such a magnitude, that opting out or transforming became increasingly unlikely. Furthermore, an accurate account of the concerns raised by those who opposed it, allows for an evaluation of what has come to pass. In other words, it becomes possible to determine how prophetic these assertions were some eighty years later in 2017, through a counterfactual analysis, undertaken in Chapter 8.3.

### 7.3.3 Municipal Electricity Undertakings: Development and Operations up to 1948

The previous two sections considered the contribution that electricity surpluses made to the overall municipal budget and then how the MEU, through the AMEU, responded to this practise. This section now completes the picture by detailing, from a technical and operational perspective, how municipalities first started generating and distributing electricity. The objective being to demonstrate, especially with regards the larger cities (and here we consider Johannesburg), how the MEU developed utilities in their own right. Johannesburg is also of significance to this research as it has had a long relationship with Escom - sometimes collaborative and beneficial, often acrimonious and difficult.

The first attempts for the bulk supply of electricity in Johannesburg were nothing short of disastrous. A concession, for electricity and gas supply with land, was granted to a private company in 1888. The company went bankrupt before any generating equipment had arrived and was acquired by the Johannesburg Lighting Company in 1891. This company did not fare much better, with only 117 and 276 houses having electricity and gas supply respectively. It was bought by the sanitary board in 1895. Gas reticulation did not develop much until 1929, but the electricity undertaking did, once the size of the gold deposits in the city were confirmed. The council expanded its own generation and entered into a supply agreement in 1897 for between 300 to 500 kW with the Rand Central Power Supply Company. The supply agreements were extended and expanded until 1906, when the city expected to generate all its power requirements internally through a new plant it had commissioned. This failed spectacularly, and a year was spent trying to fix the plant before it was shut down in 1907. The municipality then entered into an agreement with VFPTC for the supply of 1 700 kW, and over the next four years the VFPTC and the municipality attempted (unsuccessfully) to enter into long term supply agreements. The matter was resolved in 1911 when having built a new generation plant of 13 MW on the original President Street site of the failed plant, it was found “*practically equal to all demands made upon it*”<sup>81</sup>. This was largely due to the economic slowdown brought on by the outbreak of World War 1. By then the VFPTC had tired of the constant fruitless discussions and negotiations (Maud 1938, 111–114).

In 1916, the municipality evaluated an £80 000 extension to the President Street plant, but also considered using the plant as a baseload station and taking supply from the VFPTC during peak hours only. The council decided against both options, but by 1923 a decision could no longer be delayed and once again the council was faced with the same decision – additional own generation or taking a supply from the VFPTC. Based on the recommendation of a report undertaken by Clark consulting engineers and submitted to the council in April, it was decided to erect a new £550 000 power station. However, it was no longer a straightforward decision. The 1922 Electricity Act was now in force and required all new power stations, or extensions greater than 10 per cent of existing generation capacity, to submit an application to the Provincial Administrator, who was compelled to ask the newly created Escom to sanction or oppose, but not obliged to follow (Chapter 6.4.2). The timing of Johannesburg’s new power plant application coincided

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<sup>81</sup> Town Electrical Engineer of Johannesburg, B Sankey, Municipal Magazine (1927). Sourced from Maud.

with the new VFPTC power plant being planned in Witbank. Escom, which now had a financial interest in the Klip and Witbank plants, did not support Johannesburg's application and proposed three alternate power supplies for the city (McLellan 1936). The first was to take its entire supply from the Witbank plant. The second was to take a full supply from the VFPTC Witbank and Witwatersrand's plants, or thirdly to keep its existing plant and take a partial supply from the VFPTC. The Johannesburg Electricity Undertaking (JEU) though, was not going to be outmanoeuvred and countered by making piecemeal extensions to its existing plant, which were small enough not to require the Administrator's approval (McLellan 1936). The turning point in this saga came when the VFPTC was not able to adequately meet the needs of the mining industry and a reciprocal supply proposal between the two was put forward, where the JEU would supply VFPTC during the day (when the mines needed the most power) and vice versa in the evening, when it was the JEU's whose demand peaked. The city council rejected this proposal and the Administrator, against the wishes of Escom, approved Johannesburg's application for a new power station in January 1928 (Maud 1938, 116–118). Johannesburg's insistence for own supply centred around three issues: 1) Continuity of service; 2) Financial considerations; and, 3) Local industries and consequent value to its ratepayers. The first issue dealt with the high incidence of power outages that would result from a long-distance overhead transmission from Witbank due to the *"constant and inevitable interruptions, principally due from lightning"*. The consulting engineers also calculated that it would be of greater financial benefit to the city if it generated its own electricity. By this time the city had become accustomed to, and reliant on, the profits generated from its electricity trading – the returns from 1912 to 1924 were 120%. Finally, the city wanted the annual money spent on wages and stores to be kept in the local economy (Sankey & Clark 1925).

The new Jeppe power station, utilised a 10 MW turbo generator which it extended three years later with two more 10 MW generators. The demand for electricity in Johannesburg continued to grow and plans for an additional plant were only approved by the Administrator when the city entered into an agreement to buy power from VFPTC during peak periods. A major overhaul of the facility was undertaken between 1935 and 1939, resulting in a total generation capacity 114 MW. In 1939, the JEU was granted permission to build the 300 MW Orlando power station in Soweto. Delayed by World War II, it only came into operation in 1945 (Fraser 2008).

The JEU's reciprocal supply agreement with the VFPTC, and by default with Escom when they were expropriated, proved a beneficial one. Johannesburg's electricity was entirely integrated into the greater Witwatersrand system, allowing the two supply companies to assist each other during shortages. This factor is the most likely reason that Escom did not object to Johannesburg's application to build the Orlando and the Kelvin A and B power stations soon thereafter (1957 and 1962), as at the time Escom was struggling with shortages (Conradie & Messerschmidt 2000, p.137). This cooperation agreement, as we will see, ended as soon as Escom stabilised its supply. By 1959 Johannesburg had 570 MW of generating capacity and sales of 1 350 GWh (Christie 1984, p.162).

### **Rest of South Africa**

The situation was similar in most of South Africa's major municipalities, who extended their power stations or built new ones in the period 1935 – 1945. The outbreak of the Second World War provided municipalities with the opportunity to catch up with demand and viewed by *"desperate engineers as a Godsend from the devil"* (Energise, April 29 2005).

Both Escom and Cape Town municipality operated generation plants, each with its own consumers. In 1924 the two parties agreed to operate in parallel through a co-operative interchange arrangement. But with demand increasing, it became apparent that *“technically and financially the right course to pursue was for the resources of the Dock Road and Salt River Power Stations to be ‘pooled’ and for the two stations, which are already interconnected, to be operated as a single producing unit”*, and Cape Town entered into a pooling arrangement with Escom in 1932 (Escom 1931, p.31). Escom notified the Cape Town Council in 1951 that it would not be renewing the agreement when it expired in May of 1957 (Palser n.d.) The municipality had to decide whether to buy its power from Escom post 1957 or build a new power station. It opted to build a new power station (Athlone), but the council entered into a bulk purchase agreement with Escom for the period 1957 – 1961, as there would be a shortfall between the expiry of the pooling agreement and the commissioning of Athlone Power Station. Table 7-4 lists the power stations built and operated by the Johannesburg, Cape Town and Port Elizabeth municipalities since 1895.

Table 7-4: Municipal Power Stations in Major South African Cities

Power Station	Commissioned	De-Commissioned	Output (MW)
<b>Johannesburg</b>			
President Street	1906	1907	
President Street II	1907	1927	13
Jeppe Power Station	1927	1961	40
Jeppe Power Station (South)	1934	1961	74
Orlando	1939	1998	550
Kelvin Power Station A	1959	Still operating (privately owned)	180
Kelvin Power Station B	1970	Still operating (privately owned)	420
<b>Cape Town (Pooling arrangement with Eskom up until 1957)</b>			
Molteno	1895	1920	
Dock Road	1904	1962	9MW combined
Kalk Bay	1907	1923	
Salt River I (operated by Eskom)	1928	1979	90
Table Bay	1939	1983	
Salt River 2 (operated by Eskom)	1955	1995	240
Athlone	1962	2003	180
Athlone (Gas)	1973	Still operating	36
Acacia	1976	Still operating	171
Steenbrass	1979	Still operating	160
Roggebaai	1981	Still operating	40
<b>Port Elizabeth</b>			
Mount Road	1925	1985	
Swartkops	1954	1996	240

*Source:* (Palser n.d.) (Fraser 2008)(Conradie & Messerschmidt 2000)

### 7.3.4 Concluding Comment

During the time period of 1910 to 1948, the appropriation of trading profits in aid of rates was common and entrenched practise amongst municipalities. The Transvaal and Cape Provinces had no legislation to limit the transfers of profits in relief of rates, whereas in Natal and the Orange Free State ordinances had been promulgated limiting the application of trading profits. The basis used in determining the amount to be transferred varied amongst local authorities and ranged from deducting the full amount (after any losses) down to pre-determined and arbitrary amounts (Holmes & Cowden 1949, 75–80). Although the AMEU did not succeed in achieving its objective of eliminating, or setting a maximum allowable

percentage, the use of electricity surpluses for the relief of rates (in line with the British Act of 1926) it was able to demonstrate to city treasurers that the wholesale plundering of trading accounts would have long term consequences, to which they responded:

*“The appropriation of rates in South Africa to the relief of rates represents a reasonable percentage of the capital outlay of the corporation (1.96% nationally and 1.44% for Johannesburg) and is free from serious criticism, particularly in view of the fact that adequate provision is made for loan and depreciation charges”.* (Holmes & Cowden 1949, p.79)

Surpluses from all of Johannesburg’s trading departments in 1946 amounted to £277 190, compared to £415 335 in 1935, a decrease of 33%. The national average of surplus contributions as a percentage of municipal revenue had dropped to 11% by 1946. However, the municipalities were in a state of financial crisis, having been given additional functions by national government, namely the Public Health Act of 1919; The Housing Act 1920; Urban Areas Act 1920; and the Slums Act 1934, for which they received minimal financial assistance from national government. High rates of urbanization and the plight of black people, which national government ignored, contributed to their financial stress, forcing municipalities to rely on the *“limitations of the rating system as compared with direct taxation of income”*. The crossroads had been reached. Either national or provincial government intervened or local government could continue to drift, gradually losing its ability to serve any objective (Holmes & Cowden 1949, 215–218). National government’s response to a formal request for a commission into municipal finances demonstrated that it chose the latter.

### 7.3.5 A Historical Institutional Perspective

The 50- year period under review saw the genesis of municipal generation and distribution, by which time many MEU’s were utilities. Here, two inter-related features are worthy of closer scrutiny from a historical institutionalist standpoint. The first, is a textbook case study of how increasing returns leads to path dependence (Mahoney, 2000). Electricity supply was categorised as a municipal function, within its area of jurisdiction, but at the time the extent to which this function would be technically and financially feasible, let alone the proverbial “cash cow”, could not be known. As noted in Chapter 3 (Table 3.2), certain municipal functions are not able to cover costs (transport) or generate nominal surpluses (water). However, with electricity it soon became evident that large surpluses could be generated for the relief of rates; effectively as an alternate but hidden revenue source. Once this realisation was made, it was immediately seized upon, placing it on a path of increasing returns and long-term lock-in (Chapter 2.3.3), the stickiness of which has been such that it persists in 2017. By example, Table 7-1 shows that in 1905 property rates and electricity surpluses contributed 39% and 11% to total municipal revenue for Johannesburg, but by 1934 the respective contributions were 16% and 23%, property rates had dropped by more than half while electricity surpluses doubled.

The second feature is the internal tensions this practise created. Here the key actors were the councillors, municipal treasury and the electrical engineers of the MEU’s. AMEU membership allowed both councillors and electrical engineers to attend conferences, sharing equal rights and privileges. And although the views from these two camps were not necessarily universal, the research has found that there was sufficient consensus for a common view. On the one side, the councillors and treasury supported the practise; and as a hidden tax, most consumers were not even aware that they were paying it. Moreover, the ones who were aware of its existence, the landowners, benefited most from it - a gift the financially stressed

municipalities grabbed with both hands, amplifying the trend in a positive feedback loop. In contrast, there was intense opposition from the MEU's and the AMEU to this practise, (see Chapter 7.3.2). This group fought hard for the practice's abolition, but would settle for a maximum cap on surpluses, so as to bring stability and sustainable practises to their operations (negative feedback loop). Ultimately, the councillors and treasury won the day, and not even relevant international examples of national legislation to limit and then end the practise, were able to convince local or national government. As predicted by the theory (Pierson 2000b), the now locked-in path dependent practise continued accentuating the positive feedback loop, which was able to resist changes.

Here it is worth considering why the AMEU was not able to reach a completely unanimous stance on the policy, albeit that the issue was raised as early as 1917 (Chapter 6.4.2) and endured until the NP came into power in 1948, when it was finally dropped. During this time, AMEU proceeding minutes show that the outlawing or capping of the practise was the predominant view within the AMEU, yet this standpoint was never formally adopted at the annual proceedings, necessitating numerous technical committees to investigate the matter further; ultimately leading to little and eventually being abandoned. This would suggest that strong divisions and internal conflict existed within the core of the AMEU on the policy of relief of rates. However, this was not the case, for a combination of reasons. First, and most importantly, the MEU's whether represented by the AMEU or making their own representation, were a division within the municipality and thus subordinate to the ultimate decision makers within the municipality. Secondly, although the municipal councillors and treasurers (who opposed the AMEU adopting a formal position against the practise) were able to do so because they were granted AMEU membership, the same reciprocal privilege was not afforded to the MEU general managers and they had no access, knowledge or influence at UME (councillors) or Institute of Municipal Treasurers<sup>82</sup> proceedings. This placed the AMEU at a distinct disadvantage. Finally, and perhaps ultimately, although the AMEU members could convincingly argue why the policy was not a sound practise, they offered little in the way of proposing new or alternate sources of revenue. Thus, in the absence of a viable alternative to serve as a catalyst that forced a change (critical juncture), the positive feedback loop was always likely to endure; probably even if the AMEU's position was formalised and unanimous.

## 7.4 The Apartheid Era (1948 – 1994)

This section of the chapter consists of three distinct parts. The first, using the AMEU minutes from the early 1950s, provides a record of the development of the municipal ESI. Indeed, during this long time period of NP rule, there were three dominant themes relevant to this research, which the municipal ESI was grappling with. Accordingly, the research is structured to reflect this. The first period (1955 to 1969) deals with rights of supply and culminates with a critical juncture. The second period (1971 to 1988) covers the municipal ESI's era of distribution; and the final period of just five years, considers the industry's response and preparation for national democratic elections - leading up to the next critical juncture. The three periods retain the AMEU timeline format, with the objectives of: 1) Presenting developments in chronological order; and, 2) Presenting the information in a straightforward and concise manner.

The next instalment reverts to a general overview of municipal finances and the policy of rate relief. Building on this, the final section then undertakes a detailed examination of Johannesburg's municipal

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<sup>82</sup> This was confirmed in the AMEU meeting minutes

finances and electricity surpluses. The conclusion then consolidates the research and provides a historical institutionalist perspective.

#### 7.4.1 Municipal Electricity Undertakings: Development and Operations

*“The relationship between municipalities and Escom had been a love-hate one. Escom loved to have the municipalities’ extra capacity on hand in times of crisis, but loathed the way the big municipalities were seen to be taking advantage of the situation. The municipalities could not help but be suspicious of the motives of “Big Brother”, which was rapidly looking to gain and then maintain its monopoly over the South Africa electricity industry.”*

Conradie & Messerschmidt (2000, p.138)

By the 1950s the AMEU was meeting biannually and attended by the municipal electrical engineers from all the major cities and towns that generated electricity and / or had an electricity undertaking. A recurring theme was the financing of the AMEU, which relied heavily on membership fees. The trend of smaller towns opting to outsource their electricity requirements to Escom meant the closure of their electricity department and letting their AMEU membership lapse. This practise grew in the 1950s, as Escom’s new generation plants came into service. The larger municipal undertakings, especially Johannesburg, operated fully integrated utilities, and did not see themselves as electricity distributors. The minutes of the AMEU meetings<sup>83</sup> provide a blow by blow account of how Escom and national government conspired to end municipal generation, which is the focus of this section of the research. The AMEU meetings<sup>84</sup> dealt with technical, administrative, research, legal, safety and other issues of the day. The next section is a transcript of the minutes and presented in a diary format in chronological order. The contents focus on the research topic, namely the political development of the ESI from a municipal perspective, and specifically Johannesburg. As would be expected, two topics were eternal – the relief of rates and Escom. The entries include other items deemed interesting to the research.

##### Period 1: Rights of Supply (1955 – 1969)

30 November 1955: It was reported that the ECB<sup>85</sup> had agreed to give municipalities the right to supply electricity to rural areas outside their area of jurisdiction, subject to certain conditions. Johannesburg did not accept the ECB conditions and formed a sub-committee to interact with the ECB to address the issues<sup>86</sup>. Pretoria had a policy of charging higher tariffs in rural areas and the ECB required them to provide justification as to how the tariffs were derived. Cape Town charged rural users the City tariff plus 20%. The ECB wanted all undertakings to apply a standard formula for rural users, to which the AMEU rural tariffs sub-committee submitted a proposal but received no response.

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<sup>83</sup> Often the AMEU minutes make references which are vague, and refer to annexes or other sources which have not been included. Thus a certain amount of interpretation is required. The author has made every attempt to do this as accurately and objectively as possible

<sup>84</sup> AMEU minutes are only available from 1955 onwards. Records from previous years have been lost or destroyed.

<sup>85</sup> The ECB was established under the 1922 Power Act to regulate holders of licenses, excluding local authorities, government departments, the SAR or self-producers not selling electricity. Marquard (2006 p. 133) notes that the ECB had almost no capacity (with 3-5 board members and one staff member) finding no records prior to 1978. It appeared that the ECB’s time was taken up playing a mediating and facilitative role in resolving disputes rights of supply and addressing consumer grievances

<sup>86</sup> The conditions are not stated in the minutes, based on the tone and language it is assumed that they were one-sided and favoured Escom

The AMEU clarified the definition of Undertakings in November 1956, as: *“A local authority carrying on an electricity supply undertaking”*. *“Supply”* included generation and distribution. It was reported at the same meeting that undertakings across the country were experiencing difficulties with coal supplies.

The ECB had contacted the AMEU informally to get their view on amendments to the Electricity Act that they were considering. This was discussed at the May 1957 meeting and the decision was taken at the November meeting to contact the ECB directly. Of greater urgency was an ECB notification sent to all municipal undertakings. Henceforth any supply to an industrial customer, which was greater than the existing 150 kW allowable limit, needed to be approved by the Ministry of Economic Affairs - representation and the submission of an application for each connection would be required. The AMEU rejected this outright and would request the ECB to arrange a meeting with the Minister. Ventersdorp informed the committee that they would allow their AMEU membership to lapse as the municipality had decided to take its bulk electricity supply from Escom.

April 1958: The ECB responded to the AMEU's objections, informing them that the proposed conditions would be modified, but provided no further detail. Attempts to meet with the minister of Economic Affairs yielded no results. The ECB referred the AMEU to the provincial secretary, who did not reply. It was accepted that a meeting would not materialise and that a different approach was needed. A sub-committee was formed to discuss the matter with Escom directly, in the hope that the matter could be resolved amicably.

The feedback at the November 1958 meeting was that Escom had been contacted, but no response had been received and it was unlikely that one would be forthcoming. The AMEU decided to report the matter to the Institute of City Treasurers who represented their interests at the Borckenhagen Commission meetings.

May 1959: Wepener municipality allowed its membership to lapse. The theft of copper had become an epidemic and a request was to be made to national government to review laws. Municipalities opting to take their bulk supply from Escom stated that their finances were adversely affected by Escom's practise of increasing tariffs on very short notice, as this additional cost had to be absorbed until the next scheduled annual tariff increase. It was proposed that Escom increases be passed on to consumers immediately. While still waiting to meet with the Borckenhagen committee, it was agreed that municipalities be entitled to service industrial users in their areas of jurisdiction, as well as outside, but subject to permission. This decision would be communicated to Escom. Finally, a questionnaire would be drafted to determine where each municipality stood on the issue of “native” reticulation.

October 1959: The auto-adjustment of tariffs to reflect Escom increases was approved. The participants heard that the Borckenhagen committee had postponed their meeting. The ECB had not finalised the revised conditions but agreed to provide temporary permission to municipalities to extend their reticulation to rural areas. The AMEU welcomed this, because the primary concern was that smaller undertakings would negotiate directly with Eskom if the decision was delayed any longer.

May 1960: Bredasdorp and George Municipalities in the Cape Province resigned. The revised conditions for supply to rural areas had been received from the ECB, two issues were raised by the AMEU. The first was in regard to the requirement of a uniform tariff. Rural tariffs had to be divorced entirely from municipal area tariffs, as they could not be brought in line with municipal tariffs due to different cost structures and voter pressure groups. The second item was the vagueness of Clause 3, which dealt with the financial obligations of an alternate supplier taking over the distribution to a rural area, if the original

supplier was no longer willing / able / required to do so. It could not be that the alternate supplier would simply take responsibility for future interest and redemption due, with no consideration of the capital investment to date. The clause needed to allow for full compensation at a mutually agreed price. Finally, it was patently unfair to expect a local authority to invest in a distribution network only to allow Escom to decide to supply any users whose load exceeded 150 kW. Other items included confirmation that the meeting with the Borckenhagen commission was set for November 30 1960, and the supply to “native” areas would be looked at by an internal committee who would assess the possibility and the cost associated.

April 1961: The AMEU committee accepted the ECB conditions for municipal supply outside its area of jurisdiction, which maintained the 150kW supply limit, but did not accept this as an internal restrictive condition.

November 1961: The sub-committee presented its findings, which found that Escom and the undertakings were essentially competitors when it came to supplying industrial customers within a municipal area of jurisdiction. The sub-committee was authorised to meet and negotiate directly with Escom on the subject.

May 1963: It was agreed that a committee, which would collaborate with the Municipal Treasurers Association, would submit a memorandum to the 5<sup>th</sup> Borckenhagen report. It was also resolved that the AMEU forge stronger relations with the UME.

November 1964: The committee agreed to support the UME proposal that the Electricity Act of 1958 be amended to compel users situated within the municipal area of jurisdiction to take supply from the municipal undertaking, if available. To capitalise on the above UME efforts, the AMEU submitted a formal request to the UME to lobby for the amendment of the more onerous conditions of electricity supply to rural areas. Feedback was received at the May 1965 meeting. The Secretary of the Minister Commerce and Industry had informed the UME that it would not support the proposal to compel users to take electricity supply from a municipal undertaking.

October 1965: The Orange River Hydro Project team was constituted to investigate titled ‘Rights of Generation and Supply’ which would be presented to the Minister of Economic Affairs. The same team would respond to a request from the UME to provide comments to the Secretary of Commerce and Industry on the electricity supply by municipal undertakings, within and outside their area of jurisdiction. A proposal was put forward for a coordinated study of electricity tariffs.

With Orlando, the upgraded JEU peaking plant, and Kelvin A and B power stations all operational, Johannesburg started planning for the future. MM were appointed to evaluate the available options and delivered a series of reports. The first report, revised with updated figures, (MM 1966) identified: ‘Basis A’ which avoided or delayed the construction of a new plant by taking supply from Escom. ‘Basis B’ considered zoned supply, where Escom would take complete responsibility for supplying a zone of the city, with additional zones added as required. Basis A and Basis B were evaluated against a simultaneous study on the economic viability of the JEU building a new plant (MM 1965). The study, using a growth rate of 7.5%, estimated that maximum demand would grow from the 594 MW recorded in 1965, to 1 420 MW (5 700 million kWh) in 1978. Estimating the future output and derating of the existing power stations and acceptable standby requirements, it was calculated that if the JEU opted to build a new power station, it should be sized at 1 000 MW. The conclusions of the study were that a zoned supply (Basis B), was the least financially advantageous option and would also introduce transmission and distribution difficulties. A bulk supply from Escom would provide a financial benefit to the city until 1974, the expected completion



date of the new plant, and a net saving could be expected by 1978 which stabilized at approximately R1.75 million per year in 1980. The report considered the future supply and price of coal, transport costs and bulk tariff costs before recommending that the city builds a new generation plant at Liefde-en-Vrede, which would need to be started by June 1966 for the unit to be in service in March 1971. City management accepted the recommendation and submitted an application for a new power plant to the Provincial Administrator (Johannesburg Undertaking 1966).

At the May 1966 AMEU meeting, the Witbank representative reported all outstanding issues on rights of supply and generation had been resolved amicably with Eskom. This was a positive omen and the board agreed that the sub-committee continue with its work, as the ECB requirement for a standard formula for rural municipal electricity supply was not straightforward.

November 1966: The UME requested a full memorandum on the rights of supply and generation; the tariff study was deferred for a further 12 months; and a suggestion that Eskom applies a reduced tariff to municipalities was proposed, but it was decided not to approach Eskom.

May 1967: Representations made by the UME on behalf of the AMEU and Municipal Treasurers had been considered and it was felt that *'any attempt aimed at depriving local authorities of their primary right to generate and supply electricity in their own areas and utilize the income thereof for the benefit of their communities had not been brought out forcibly enough by them'*. To correct this the AMEU and Municipal Treasurers would be invited to at all future UME meetings, which included an upcoming meeting scheduled for August with the Minister of Economic Affairs.

A meeting with the Minister was held on 23 August 1967, but as the delegation was only granted one hour, only three items were addressed: Firstly, a proposed amendment to the Electricity Act, providing as a matter of right, the opportunity for a municipality submitting an application for a generation license to respond to any comments or objections made by Escom. The Minister agreed to this but Escom came forward requesting that they too have the right to respond to the reply. Secondly, for local authorities to be represented at Escom and the ECB. The Minister's view was that this was unlikely as it would set a precedent for other ESI participants to claim the same right. The UME pointed out that this was unlikely as only Escom and municipalities were licenced to generate electricity, but the minister decided to withhold a final reply. The final item was a request for the ECB to report to the provincial administrators rather than Escom. Under the existing arrangement it was difficult for the municipalities to conclude anything other than that Escom representatives protected their own interests in their reports – acting as consultants, competitors and as an interested party, all at the same time. Mr Leishman, representing Johannesburg, demonstrated that Johannesburg could generate electricity at a cheaper rate than the bulk tariff that Escom charged the City and that the municipality would be using sewerage water for as much as 80% of the plant requirements, whereas Escom used fresh water only – a 1956 study concluded that water would be a limiting factor to the country's economic development (MacKay, 2003). It was further requested that should municipal borders be extended, electricity supply becomes an automatic right and subject to the outcome of a negotiation with Escom. The Minister would only make two promises. The first; giving local authorities the opportunity to reply to points made by Escom in its reports to the Administrator, and the second; that local authorities retain the right to generate electricity, but only if it was shown that this could be done cheaper than Escom. The Minister undertook to put these two points in writing and respond fully to the UME memorandum submitted. This had not been done at the time of the May 1968 AMEU Conference (Giles 1968).

At the May 1968 AMEU meeting, Mr Leishman stated that the Minister's failure to respond was causing serious delays to its application for a new generation license. It was agreed that Johannesburg and Port Elizabeth would send 'reminder' letters to the Minister and Provincial Administrators. Mr Leishman also advised the AMEU committee that the City had decided to institute legal proceedings and would approach the Supreme Court to get its application to build a new power station approved.

November 1968: A response<sup>87</sup> from the Minister was received after the release of the findings and recommendations of the Borckenhagen Commission report. The Minister adopted the Commission's pronouncement that *'the country's requirements of electricity should be undertaken by Eskom'*, summed up by the following statement:

*'Accordingly, I trust that your Executive would give positive support to the Government's policy and that it would encourage its members to tailor their planning so as to fit in with the Government's objectives. Your co-operation in this matter would be sincerely appreciated'*

In reaching its conclusion, the commission stated that no evidence had been received from local authorities. Leishman disputed this, stating that the commission had made no request for any evidence on municipal generation to be submitted. Mr Lombard who represented the AMEU at the commission hearings, stated that the only issue raised was the right of supply in urban areas and that the matter of generation had not come up. A lengthy debate ensued with opposing views, which on the one hand accepted that Escom would in future be the de-facto generator of electricity and on the other that the strongest possible action be taken to protect municipal rights to generate electricity. It was resolved that the UME be requested to arrange a follow up meeting with the Minister, with the requirement that he be properly briefed and that it not be limited to a brief session.

June 1969: Reporting on the outcome of a meeting held in Margate<sup>88</sup> between all affected parties to resolve the rights of supply issue, (which came to be known as the Margate Convention), the AMEU had agreed to accept the minister's proposal from his letter as *'probably the best solution to the problem'*. Municipalities henceforth accepted that Escom would become the *de facto* bulk supplier and generator of electricity, leaving distribution to them. In return for the loss of revenue, municipal distribution borders would be extended, subject to an agreement reached between Escom and the municipality. The AMEU requested that the UME take responsibility for entrenching this principle in the Electricity Act. The Margate Convention was the event where local authorities relinquished their right to generate electricity.

In the 1969 Johannesburg Annual Report of the General Manager Electricity Department (Johannesburg Undertaking 1969, 1–4), Leishman confirmed that the Provincial Administrator, following the directive of the Minister, had turned down Johannesburg's application for a new 1 000 MW power station for the third time on the 14<sup>th</sup> of April 1969. A detailed explanation followed, explaining that the city never contended that it could generate more cheaply than Escom, but that the bulk supply rate offered by Escom was higher than the cost of self-generation. The city attempted to get an assurance from Escom that tariffs would not increase by more than a third over a period of 15 years (coal costs excluded), but Escom would not agree to this. Even though the lawyers felt that there was a high chance of the Administrator's decision

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<sup>87</sup> A copy of the letter is not attached. The contents are derived based on the responses from the meeting minutes

<sup>88</sup> Meeting minutes were not found in the archives, but references in the AMEU minutes make it clear that the UME, AMEU, Escom and ECB were present. It is also likely that national government was represented, but this is not certain

being set aside, it was decided to take bulk supply from Escom as demand was growing and the plant could not be built before demand would exceed supply.

*'The situation now is that Johannesburg, and the other large municipal self-generating authorities, will now contribute to the national power system being created and it is anticipated that this will be at a greater cost than self-generation so far as estimated up to the stage of completing the proposed 8 X 125 MW new power station by 1980.'* (Johannesburg Undertaking 1969)

R Leishman took early retirement the following year. Having fought so hard for so long, the loss was crushing, and he lost his will to continue<sup>89</sup>.

## Period 2: A new Business Model - Era of Distribution (1971 – 1988)

Having lost the rights of supply battle, MEU's had to adjust to their diminished role of distribution and accept that they were now price takers with limited bargaining power. Generation activities were reduced to nursing their existing power plants to eke out every last kW of power. With Escom firmly in control of ESI, it was in its interest to maximise municipal electricity consumption, as this presented a new market which would underpin its build programme. The next two decades saw less acrimony, characterised by greater cooperation, but mutual tension was ever near.

September 1972: Escom agreed to support the AMEU application to the ECB to remove the 150 kVA supply limit to industrial users.

May 1973: Following from the Margate Convention, the transfer of distribution rights from Escom to Municipalities had commenced<sup>90</sup>; Escom informed the AMEU that its application to be represented at Escom had been rejected and the AMEU decided to drop the matter<sup>91</sup>.

During the periods 1973 to 1977 there was much discussion and debate about the interpretation of how Escom-owned distribution infrastructure should be valued, based on the recommendation of the 2<sup>nd</sup> Borckenhagen report. The AMEU felt that they were represented in an unsatisfactory manner by the UME and decided to approach Escom directly. This approach yielded better results, but unexpectedly and contrary to the commitment made in 1972, Escom reversed their decision to remove the municipal 150 kVA supply limit to industrial users. A furious AMEU submitted a new application to the ECB to have this condition removed. In response to frequent tariff increases with no notice period, Escom stated that it was not able to provide a six-month notice period.

May 1977: The AMEU noted the Government's Commission of Inquiry (Browne) to identify the reasons of Escom's frequent and high tariff increases, and that it would make a representation.

November 1977: Escom notified municipalities that load shedding was to be expected.

March 1979: Discussions were held with the ECB about distributing to areas outside their jurisdiction; and a committee to explore the viability of solar water heaters to reduce overall and peak demand was set.

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<sup>89</sup> Meeting with Stan Bridgens on 5 September, 2016

<sup>90</sup> The minutes do not clarify whether this included the transfer / control of assets. Given that such an arrangement was never mentioned in the minutes, it is presumed it was limited to the rights

<sup>91</sup> At the 23 August 1967 meeting with the Minister (see above) it was agreed that local government would have direct representation at Escom and the ECB

October 1981: Escom requested that the notice period for tariff increases be reduced from three to one month. This was rejected by the AMEU who stated that three months' notice was the absolute minimum.

JEU had entered into a bulk supply agreement with Escom in 1973/74 when its plants were no longer able to meet demand. Later that decade, the JEU commissioned MM to undertake two reports. The first, evaluated how the city's power supply system (MM 1979) could be best used to maximise profits from its existing plants; shield its users from excessive Escom tariff increases, Escom changes to the tariff structures and frequent outages. The report analysed usage patterns, forecast future consumption for planning purposes and discussed how to maximise the Orlando and Kelvin plants. The study reported that the 1978 maximum demand of 1 066 MW would reach 3 189 MW in 2000, which could be reduced to 2 839 MW through energy efficiency measures (load control and higher tariffs). The second report, (MM 1981) investigated the viability of new generation opportunities, including unconventional options. The study concluded that it was not economically feasible to build a replacement power plant at Orlando. Peaking plants were found to be uneconomic and with too many technical barriers. Likewise, pumped storage opportunities were too small to be viable and alternate technologies investigated were not viable. The best option, the report concluded, was for the JEU to invest in extending the life of their existing fleet for the longest period possible.

August 1984: The De Villiers Commission had been formed, to which the AMEU made representation. The advisability of a standard tariff for users would be considered and national workshops on township electrification were attended by AMEU representatives.

September 1985: The AMEU submitted comments on the draft Energy Policy: 1) On municipal generation, the policy needed to allow for security of supply and not limit itself purely to economic considerations; 2) AMEU fully supported load management and energy conservation, which needed to be co-ordinated by Escom, with the AMEU willing to serve on any committee; 3) Electricity Amendment Bill: Section 22(5): The ECB needed to retain control over surpluses derived from municipal electricity trading, but individual tariffs need not be approved and gazetted; and, 4) The RSC's role should be limited to co-ordinating major engineering and financial planning. Distribution must only be undertaken by local authorities.

September 1986: Escom agreed (relented) to fixed annual increases on the 1<sup>st</sup> of January.

November 1987: Eskom power marketing approaches the AMEU to market electricity jointly. Support and training would be provided at the branch levels, with an undertaking that future strategies be worked on jointly, to which the AMEU agreed.

February 1988: Eskom provided an assurance to the AMEU that a maximum demand charge would not be levied on MEU's that still generate electricity.

### Period 3: Quo Vadis - Preparing for a Democratic Government (1988 – 1994)

*'The statement that the distribution industry has not been 'capable' of supplying electricity to those who need it is incorrect and objectionable. The distribution industry was not allowed to do so by Government policy'* AMEU response to Department of Mineral and Energy Affairs Report on the Development of the EDI November, 1992 (AMEU 1992)

By 1988, AMEU and Eskom relations had improved significantly. Eskom had recently, as a consequence of the De Villiers commission, transferred most distribution areas to municipalities, but these were taken

back when the supply of townships and rural areas began (Marquard). Eskom's new management team worked hard to improve public perception of the utility and there appeared to be a new openness and sincerity in their relations with the AMEU. Eskom was entering a period of over-supply and started offering tariff discounts and forming joint working committees. The AMEU in February 1988 for example, agreed to work with Eskom in developing and implementing their Power Marketing campaign. Given the history between the two, it was never going to be straightforward; and indeed both were operating in a highly charged and uncertain economic, political and structural environment. P W Botha's privatisation plans, strongly supported by the Minister of Minerals and Energy, DJ De Villiers (not Willem Johannes who chaired the De Villiers Commission of Inquiry), meant the entire ESI was nervous and tended to overreact to most events. For example, McRae's "Electricity for All" programme which was still being developed and not publicly communicated for fear of national government reprisals, only stoked the flames of distrust. Municipalities reported Eskom distribution activity in black urban townships to the ECB, and the AMEU took the matter directly to McRae and Maree. A meeting was held in early 1989 where Eskom assured the AMEU that it was not its policy to interfere with municipal supply areas and that any takeover of Eskom systems by municipalities would be determined by economic principles. Eskom actions were blamed on a miscommunication between management and the sub-regions, which they would correct. The AMEU left the meeting satisfied but remained wary of its old foe.

The AMEU 1989 Cape Town conference was themed '*Quo Vadis*', and was part of a broader strategy to define the Association's objectives, mission and function, in response to the Department of Planning and Provincial Affairs deliberating on the future of municipal electricity supply, under the privatisation push. A discussion following the opening address, saw the Eskom representative (Botes 1989) state that "*red lights are flashing*". Eskom and up to 500 municipalities served 4.5 million users, yet 22 million people still had no access. Electricity for all (by now formally announced by Eskom) was a priority and an imperative and could only be achieved by rationalising the ESI. Consumers would need to be supplied by distribution companies and not municipal undertakings, of which no more than 70 were needed. This bombshell was followed by his personal view that Eskom itself needed to be broken up to form part of the 70.

The AMEU's response was immediate. An extraordinary meeting on the 'Rationalising the ESI' was held one month later on the 10<sup>th</sup> of November, 1989 (Minutes 1989). AMEU members were incensed:

*"...municipal electricity undertakings have been running well and ESKOM was looking to off-load non-paying black areas..."*

*"...how would ESKOM supply electricity to black areas, as they neither have the manpower or resources to do this efficiently."*

*"...combined venture as proposed by ESKOM...would mean that industry will subsidise black areas"*

Having vented their frustrations, the discussions changed tone and members confirmed their commitment to electricity for all; requesting a meeting with Eskom for an official clarification of their interpretation of rationalisation of the ESI. Less than three months later, with the government now under F W de Klerk, the Minister of Energy in his budget speech announced that he did not see Eskom as a suitable candidate for privatisation in the near future (Conradie & Messerschmidt 2000, p.263).

Eskom was given a reprieve but the future of municipalities remained uncertain. In October 1990, the Thornhill Report was released (Section 3.4.1 page 53), and it became evident that things were changing and MEU's were undoubtedly about to encounter major structural change. '*Quo Vadis*' became a priority

and a full day workshop produced a SWOT analysis (Figure 7-2). Although none of the models proposed by Thornhill were ultimately adopted, the report created the basis for discussion and ultimately led to the consolidation of municipalities which took place under the ANC government<sup>92</sup>

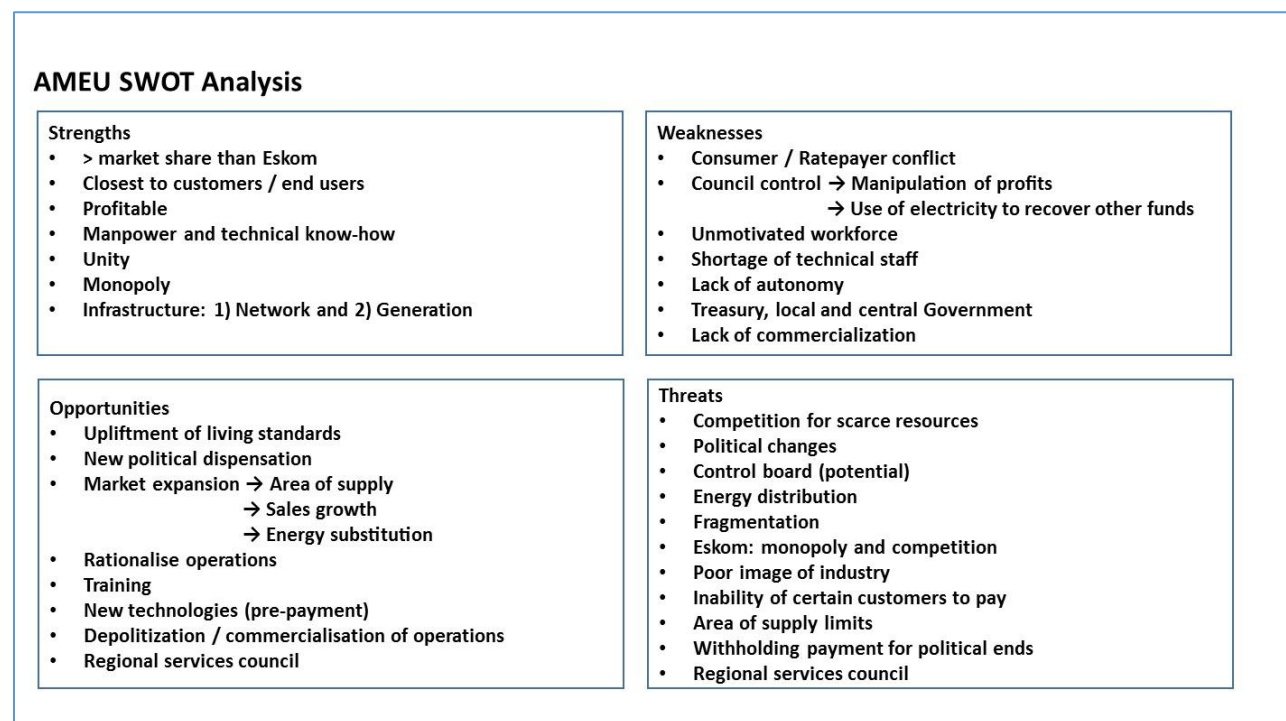


Figure 7-2: AMEU 'Quo Vadis' SWOT Analysis

From 1990 until the 1994 elections, the regionalisation of EDI dominated discussion. During this charged and uncertain period, the stakes were high. Consultation extended beyond the traditional industry participants of government, AMEU, ECB and Eskom. The AMEU had to position itself in the ongoing National Electrification Forum (NELF) discussions, which had multiple and diverse stakeholders<sup>93</sup>, who the AMEU was not accustomed or familiar with. The AMEU had to reach consensus amongst its constituents, which was not straightforward as they had different political affiliations. Ultimately it was agreed, and communicated externally, that the AMEU accepted that regionalisation<sup>94</sup> of some form was necessary. The following is a summary of the documents and reports produced by the AMEU to convey its standpoint and define its role in any future structure.

The AMEU agreed that the EDI needed some form of rationalisation but noted that the proliferation of supply authorities was a direct result of government's devolution policy. As most local authorities supplied less than 20 MVA, the system was grossly inefficient, but was designed according to national policy that required separate and autonomous electricity supply authorities, rather than developing a technically efficient and integrated system. A negative consequence of this practise was staff shortages. Integrating the systems into larger units was therefore supported by the AMEU, as it would improve efficiency. The

<sup>92</sup> Interview with Professor Chris Thornhill (author) 14 July, 2016

<sup>93</sup> These included: Chamber of Mines, ANC, National Union of Mineworkers, National Union of Metal Workers, Department of Mineral and Energy Affairs, Eskom, Organised Business, National Civic Organization (SANCO), Agricultural Union (SAAU), UME and the Energy Development Research Centre

<sup>94</sup> The terms regionalization and rationalization are used interchangeably in the various reports. The research quotes the term used based on the report being sourced

AMEU however, adopted a peculiar, and frankly inexplicable, stance on the issue of too many tariff structures leading to cross-subsidisation. It noted complaints submitted to the ECB about high municipal tariffs, primarily from black areas, and argued that the practise of building separate infrastructures was extremely costly, naturally leading to large differences in tariffs. Adopting a sliding scale meant that there would be an over-recovery in white residential areas to cover the costs of a BLA, which went against free market principles that promote efficiency and productivity. The AMEU challenged the notion that municipalities were charging high tariffs to rural areas, on the basis that Eskom under-recovered on its Tariff D (rural supply), effectively cross subsidising the service. The ECB thus needed to take steps against Eskom rather than suggest that Eskom take over municipal supply to rural areas (AMEU 1990).

January 1991: Eskom's introduction Time of Use (ToU) to large customers, led to a shift in usage and a loss of revenues for municipalities (Figure 7-8), which was to be recovered from households. AMEU has lobbied Eskom (unsuccessfully) for the ToU tariff to be based on a daily, and not a monthly maximum. Concerns were raised at the meeting, that Eskom had applied to provincial government to start distributing electricity to urban black residential areas, with the view of taking control of this market. Essentially Eskom was planning to compete against municipalities, which was contrary to the 'Margate Convention'. Municipalities were encouraged to take steps to protect their client base.

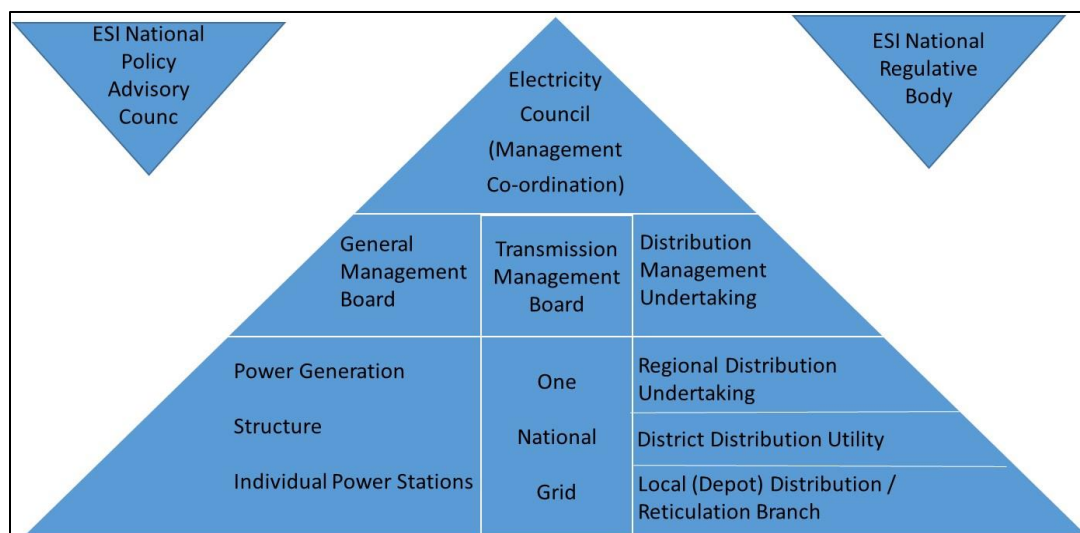
September 1991: Government new policy resolved to make electricity available to all who could afford it. To achieve this, it was necessary to identify ways to make electricity more accessible through regional, rather than local, supply; standardised tariffs and by-laws; depoliticising supply and easier financing.

June 1992: The AMEU and Eskom met to discuss tariffs: 1) It was resolved that an agreement be reached as to the extent that Eskom would be allowed to influence municipal tariffs; 2) Municipalities would support standardised tariffs, if Eskom would do the same; 3) The development of regions around a nucleus was acceptable, on condition that in time they came under the government control; 4) The introduction of ToU tariffs for households was needed; and, 5) National inclining block tariffs would be introduced.

In September 1992 the AMEU attended the inaugural NELF workshop<sup>95</sup>, where electrification was the major theme and the restructuring of the EDI was debated. Consensus was reached on the 'suppliers' being Eskom and the AMEU, but no consensus could be found as to whom should represent the 'users' and the matter was referred to a committee for resolution. The AMEU recognised the need for: EDI regionalisation, the acceleration of the electrification programme and the need for simplified tariffs, but noted that vested interests were likely to resist change and that local authorities were best placed to undertake distribution. The AMEU ended its presentation by calling for a rationalised ESI (AMEU n.d.) Figure 7-3.

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<sup>95</sup> National Electrification Forum (NELF) was formed in 1993, at which Eskom came to an agreement with the ANC that it would electrify 2.5 million homes between 1994 and 1999 (See Phase IV Regeneration Chapter 5.5.2)



Source: (AMEU 1993)

Figure 7-3: Proposed ESI Structure for South Africa (1993)

In May 1993 Eskom applied to become an AMEU member and invited the AMEU to a workshop on pre-paid tariffs. Following the NELF national conference (May), the AMEU position was articulated in its November Progress Report (AMEU 1993) - summarised in Table 7-5.

Table 7-5: AMEU NELF Progress Report

Structure and Regulatory Framework
<ul style="list-style-type: none"> <li>• <b>Governance:</b> Rationalisation of EDI could result in municipalities losing their right to distribute electricity</li> <li>• <b>Structure:</b> Three models proposed (regional, district and local – Figure 7-3), but all requiring independent oversight</li> <li>• <b>Metropolitan Alternative:</b> Unpopular choice as cash surpluses would not be distributed equitably</li> <li>• <b>Local Authority and other Generation:</b> As Eskom was performing well, it would remain intact for the present period. Municipal generation remained unresolved. Generation should not be the sole right of one entity</li> <li>• <b>Legitimacy:</b> Future local authorities must be accepted as legitimate as payment attitudes are linked to this</li> </ul>
Finance and Tariffs
<ul style="list-style-type: none"> <li>• <b>Electricity Surplus to other Services:</b> Consensus that electrification be funded from within ESI<sup>96</sup>. Before agreeing to this, if at all, alternative sources of revenue for the municipal sector would need to be identified and put in place</li> <li>• <b>Transfer of Assets/Liabilities:</b> A mutually agreed policy before the transfer of assets could take place, if distribution ceased to be a local authority responsibility</li> <li>• <b>Non-Payment:</b> Estimated at R1 billion in 1992 and growing at R25 million p/a, the issue was raised as a priority</li> <li>• <b>National Domestic Tariff:</b> The over 1 000 tariffs (1c to 45 c/kWh) were partly responsible for non-payment. A national tariff would increase tariffs in established areas (white), but principles would have to be agreed upon</li> <li>• <b>Development Funding:</b> A fund established to prioritise the national electrification programme</li> </ul>
Other
<ul style="list-style-type: none"> <li>• <b>Human Resources:</b> Existing staff would need to be accommodated and absorbed</li> <li>• <b>Transition:</b> Rationalisation must be undertaken in an orderly fashion to avoid unnecessary disruptions</li> </ul>
Recommendations
<ul style="list-style-type: none"> <li>• Local government remains engaged in the process</li> <li>• The future government should not accord one party sole generation rights</li> <li>• Local authorities are adequately compensated for any loss in revenue as a result of the regionalisation process</li> </ul>

<sup>96</sup> AMEU experience was that average consumption for white households was 1 000 kWh / month but just 200 kWh for black households, which was insufficient to fund a distribution system, even with higher densities in black areas. This necessitated a fixed charge but only served to make electricity tariffs higher to those who could least afford it.



March 1994: The AMEU, UME and Eskom met a month before the elections to discuss municipal levies. The AMEU agreed that electricity was an essential service and should be provided at the lowest possible price. The UME stated that the municipalities had become very reliant on the surplus, so it could not be arbitrarily removed. This gave the opportunity for the AMEU to once again put forward its views, held from the 1930s, that the surplus be shown as a visible tax. Eskom offered the AMEU representation at its tariff committee and all agreed on the need for a national tariff, subject to a working model agreed to by all.

The immediate section that follows, now casts focus on municipal finances and the practice relief of rates from MEU revenue during the current period under discussion.

#### 7.4.2 Municipal Finances and the Policy of Rate Relief from Municipal Electricity Undertaking Revenue

With the NP in charge, and the same funding challenges, the UME (1953) once again approached national government for the appointment of a commission of enquiry into their finances and how financial relief could be provided. Indeed, the issues raised and the proposals put forward, differed little from those of 1944; with the following problems deemed as requiring investigation (Jenvey 1964, p.149):

- The appropriation of funds to central and provincial government, which are generally regarded to be local sources of revenue; for example vehicle licensing fees not accruing to local government and the practise of exempting national and provincial government from paying local rates and license fees;
- Central government delegating functions such as health services to local government, but failing to provide additional revenue;
- Additional burdens expected as a result of post-war development;
- The limitations imposed by the restricted nature, and lack of elasticity, of the sources of revenue available to local authorities; and
- The possibility of finding means to overcome the financial difficulties imposed by the above factors, by broadening the basis of local taxation.

Government finally yielded, and in August 1956 the Minister of Finance appointed a committee to be chaired by Mr Borckenhagen. The Committee of Enquiry into the *Financial Relations between the Central Government, Provinces and Local Authorities* understandably came to be known simply as the Borckenhagen Report. The terms of reference asked the committee to investigate and report on *inter alia*: The existing functions of local authorities, whether these were justified and the extent to which functions should be abolished, diminished or transferred; the sources of income of local authorities, and the adequacy of the income sources to perform these functions; and, any alterations to the sources of income that “appear to be desirable”, together with the impact that such alterations would have on national and provincial finances, as well as the legal considerations to give them effect (Borckenhagen 1964).

The Borckenhagen enquiry took 15 years to finalise. Individual reports were issued during the 50's and 60's, but the government only released the White Paper setting out its standpoint in 1971; whose outcomes ultimately provided nothing but disappointment for local authorities after such a long period. Lewis (1987), mayor of Johannesburg in 1970, who had been so hopeful in 1966 that new sources of revenue would be granted, lamented: “Little help could be expected from its (White Paper)

*recommendations, as it based its figures on outdated 1962 statistics*". The committee took the view that there was no justification for provincial or local government to pay local taxes, but proposed that certain functions, most notably in health, be redirected to provincial or national government; figuring that this would materially reduce the financial burden on local authorities. Given the reduced functions, the committee could not support the contention that local authorities were reaching the economic limits of property taxation or that they needed any new sources of revenue. It left it to national government to decide on the suitability of license fees, and local sales taxes for government – suggesting that the latter should be collected by national government and distributed on a suitable basis to local government. With relation to electricity supply, the committee sided with Escom. Although stating unequivocally that distribution and the associated surpluses for municipal funding should reside with local authorities, industrial users (mines, railways and other large users) should be afforded the protection of Escom rates. This entrenched Escom's right to directly supply energy intensive users and drove the final nail in the coffin for municipal electricity generation. (Marquard 2006; Jenvey 1964; Borckenhagen 1964; Craythorne 1982; Browne 1983)

*"..the main task of meeting the country's requirements of electricity should be undertaken by Escom, and that further expansion of municipal generation stations in areas which could be supplied by Escom be discouraged"* (Borckenhagen 1964, p.15 Fifth Interim Report)

The practise of rate relief from electricity surpluses was officially sanctioned by national government when it endorsed the following finding from the report in the 1971 White Paper (Ministry of Finance 1971):

*"Profits on power for industrial use should be limited but the Committee believes that the picture of profits made by local authorities in the trading departments can be exaggerated"*

Not surprisingly, municipal finances did not improve after the Enquiry. The issue remained high on the agenda for municipalities and they continued to lobby government. The topic also caught the attention of academics, see (Botha 1969; Various 1979; Penny 1967; Scholes 1976; Manning 1969; Cowden & Holmes 1969; Botha 1973). The research topics varied and included: the deficiencies of the municipal funding system; the inequity and shortcomings of the property rating system; the inability of local government to undertake its functions due to funding shortages forcing it into an ever-increasing cycle of cross-subsidisation; and the growing burden placed on municipalities to deal with social problems created by apartheid. Alternative and additional models were put forward, all of which were largely ignored by national government.

Municipalities however, were in distress, through escalating internal costs, the combination of high inflation and nominal interest rates, as well as a lagging base on which to levy property tax as principal revenue source (Solomon 1983, p.10); and national government was finally forced to act. In 1976 the Minister of Finance appointed the Committee of Inquiry into the Finances of Local Authorities, which was chaired under GWG Browne. The objective of the report was to report on the adequacy of the existing sources of finance for local authorities; adjustments needed to establish a more satisfactory relationship between income and expenditure; and the extent to which finances could be improved through efficiencies and financial controls (Browne 1980). As with Borckenhagen, the Browne report offered little to the municipalities. No new revenue sources were identified, in fact implying the opposite and proposing that municipalites were inherently inefficient and should put their affairs in order – a finding that was expressed forcefully (Browne 1980). For capital projects, the report recommended that this ought to be done through the Capital Development Fund – a model used by Durban. The Committee even sought to

reduce existing revenue sources by recommending that the surpluses from all trading services be restricted to 10% for five years, and thereafter to a maximum of 5%. Browne recommended a system of transfer from white to Indian and Coloured local authorities, and joint services committees for areas of common interest (James & Simons 2008). This was the precursor to the introduction of the Regional Services Councils. Craythorne (1982) provided a scathing analysis of the work done by the Browne committee, finding fault with its limited understanding of local government and stating the committee clearly pushed through national government directives:

*"The startling display of ignorance could have been avoided.... It might have been hoped that having got off to a bad start the report might have improved but unfortunately this was not the case"*

*"It is difficult to escape the conclusion that this was deliberately done to avoid dealing with the need for subsidies to local government."*

The Browne report was not well received by local government. Under pressure, national government set up yet another inquiry – the Croeser Working Group on local government finances, and focused on surpluses from electricity distribution. The Croeser working group overturned the Browne recommendations and suggested that surpluses be restricted 'as far as possible to 10%'. The group also endorsed and promoted the policy of RSCs (see Page 44-48). The Regional Services Act of 1985 introduced a levy on a business's payroll and turnover (RSC Act 1985).

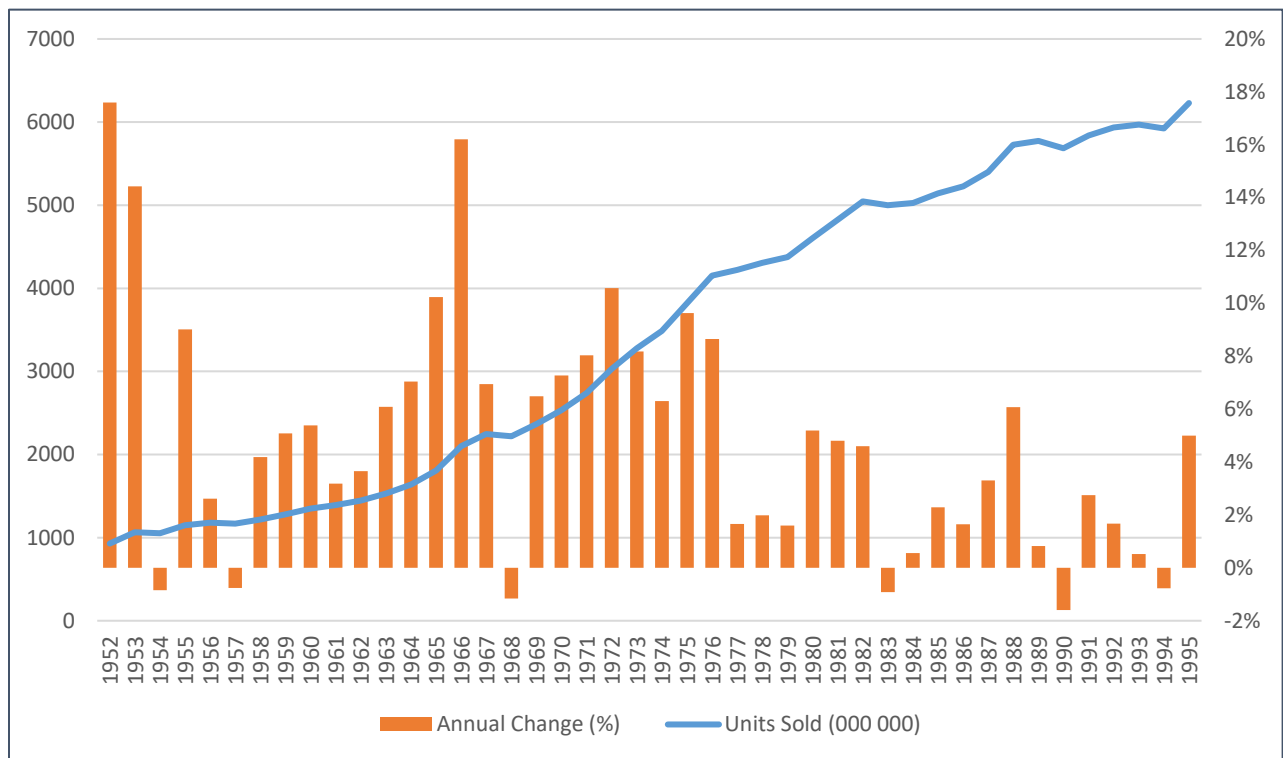
Ultimately, the issues facing local government were not resolved by national government. In truth, its actions made matters worse, and it would appear that the commissions of enquiry fixated on identifying weaknesses in local government; indeed that they served as a vehicle to introduce new national policy under the guise that consultation had taken place during the investigation. The broader economic and political situation compounded the issues even further; and in trying to keep the country solvent in the mid to late 1980s, the Finance Ministry took control of local government finances from the provincial administrators.

In all of this, funding local government in an inflationary and stalling economy was difficult, while municipalities still had few instruments with which to raise funds. The contribution made from electricity surpluses thus had not only grown in importance over the years, but as shown in the tables and graphs below, became a primary funding source.

### 7.4.3 Johannesburg's Municipal Finance and Electricity Surplus

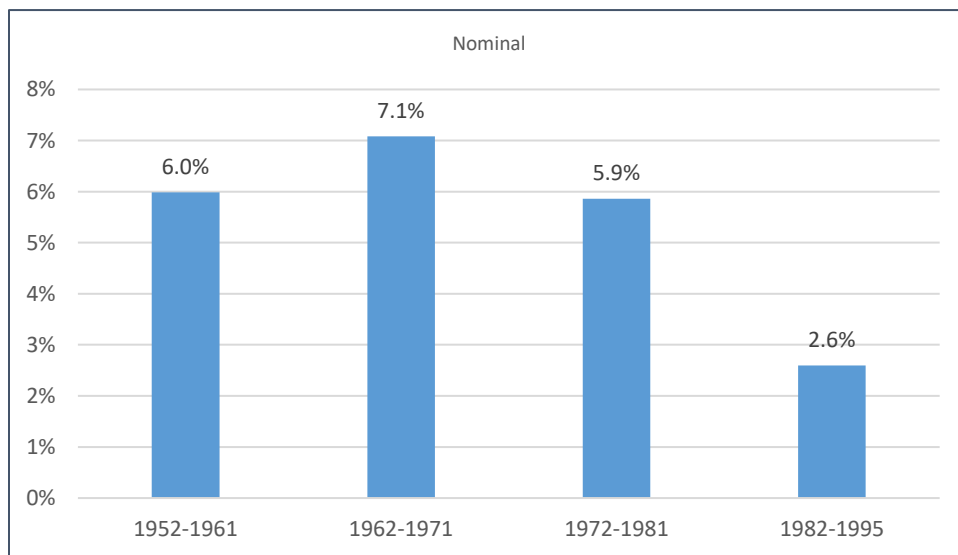
When looking at Johannesburg as a particular focal point for this period, one immediately notes that in line with its population and geographical expansion, so too did electricity consumption grow. Here Figure 7-4 illustrates the growth in electricity usage for the period 1952 - 1995. The JEU sold 928 534 029 units in 1952 and 6 229 159 044 in 1995 – an average growth rate of 4.9% (Figure 7-5).

Figure 7-4 shows both macro and micro trends. For example, 1953 and 1954 reflect the post-war boom years, while the period up to 1976 reflects the positive economic conditions punctuated by small recessionary periods. The impact of the Soweto riots is clearly visible (1977 - 1979), followed by the short-lived gold run of the early 1980s. From thereon there is modest growth due to high tariff increases and of course the political and economic environment.



Source: JEU Annual Reports of the General Manager of Electricity

Figure 7-4: JEU Annual Sales (1952 - 1995)

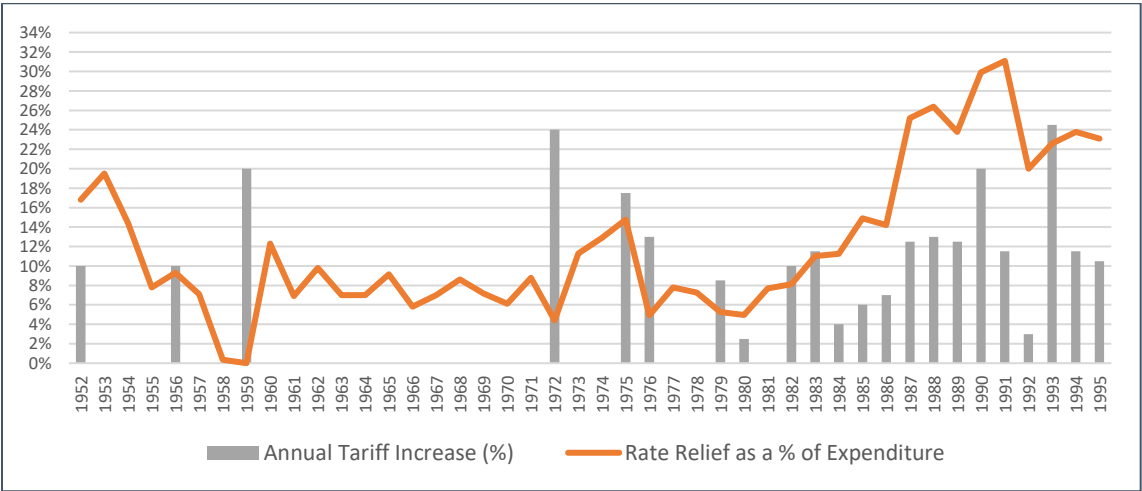


Source: ibid

Figure 7-5: Average Percentage Growth in Electricity Sales for Johannesburg (1952 - 1995)

Figure 7-6 is interesting for many reasons, as it shows how electricity surpluses became a reliable and indispensable source of revenue. The relationship between a tariff increase and an increased surplus in

the following year can be seen clearly. Notable examples include 1959, 1972 and from 1985 onwards. Infrequent but larger nominal tariff increases up to the late 1970s, were replaced with smaller annual tariff increases to begin with, becoming more significant in the late 1980s.



Source: ibid

Figure 7-6: Annual Contributions towards Rate Relief and Tariff Increases for Johannesburg (1952 - 1995)

Table 7-6 below, now provides a summary of key events and explanatory notes to Figure 7-6 above.

Table 7-6: Key Events and Explanatory Notes to Figure 7-6

Year	Events / Explanatory Notes
1952	10% tariff increase led to large surplus (£325k contribution to tariff stabilization fund and £362k to rate relief). Concern that increasing interest rates will decrease future profits, but stabilization fund to delay tariff increases
1958	£178k withdrawn from stabilisation to add to £173 surplus to make a £351k contribution to the relief of rates
1959	For the first time in over 20 years, the rate fund had to contribute to electricity operations. Due to high capital charges, a mild winter and poor economic conditions, necessitating a 20% tariff increase. The GM notes: <i>"tariffs were reduced in 1936 and during that 13-year period only increased twice (10% in 1952 and 1956), compared to a 200% tariff increase in other commodities over the same period."</i>
1960	Net surplus of £789k apportioned £500k to rate relief and the balance to the stabilisation fund
1961	No tariff increase forecast for at least two years. South Africa becomes a Republic, abandons the British Pound and introduces the Rand at an exchange rate of 2:1
1965	Buoyant economic conditions leading to a surplus of R2.38 million <sup>97</sup> . R1 million allocated to the relief of rates. The rate stabilization fund had accumulated R2.5 million and a decision was made to use the money to buy gas turbines. Surplus revenue from electricity in future would be allocated as follows: <ul style="list-style-type: none"> <li>• 40% or R1 million (whichever the greater) to the relief of rates</li> <li>• 36% to Council Capital Development Fund</li> <li>• 24% to electricity capital development fund</li> </ul>
1971	Financial results for the year were disappointing and a tariff increase would become necessary
1972	High costs had a material impact on profit, necessitating an electricity tariff increase aimed at raising revenue by up to 25%. Three different tariff structures were introduced (domestic block, non-domestic block and a demand tariff with off-peak). R1.5 million was withdrawn from the stabilization fund. It is the first tariff increase in 12 years
1973	Record surplus of R6 568 428 recorded
1975	Increased operational costs result in a reduced surplus, prompting an application to the Provincial Administrator to authorise a 17.5% increase
1976	Revenue increased by 23.1% but offset by 38.9% increase in costs. The decreased surplus is seen as a direct indication of the economic climate of the country
1978	Despite tough trading conditions, a record surplus of R8 493 814 was recorded, attributed to the strict control of expenditure. Tariffs were restructured to manage demand, with 90 MW maximum demand reduction targeted due to Eskom's supply shortfall and JEU reduced generation. JEU issues a warning that the current situation of selling electricity at below cost and not reinvesting in assets cannot continue. The low charges are only possible because of what is supplied internally (self-generation), decreasing annually as the existing plants lose efficiency and O&M costs increase. A much higher electricity tariff is forecast for the future
1979	Programme to electrify Soweto continues, but an inadequate budget resulted in regular outages due to overloading. Tariffs increased by 8.5%
1980	Sales increase, prompting the hope of an economic recovery. Policy is to maximise own supply which is significantly cheaper than Eskom. A R2 million spent to develop a monitoring facility to achieve this objective
1983	Economic recession results in the JEU recording its first ever decrease in sales (0.9%). Investment in control centre led to a R7.5 million saving in Eskom demand charges. The JEU supplies the Sandton area, levying an 18% surcharge
1987	Record surplus of R104.8 million (nominal) recorded. Tariffs increased by 12.5% to ensure that the required surplus was achieved. R800k allocation made to subsidise electricity tariffs in Lenasia
1990	Two annual tariff increases become unavoidable (1988, 1989 and 1990) due to Eskom increases on short notice. Ageing staff, an inability to attract and retain new recruits result in the need for consultants, estimated to cost four times more. Old plants can no longer compete with Eskom pricing, resulting in a decline in generation
1991	Eskom begins process of phasing out special tariffs (discounted) tariffs, prompting the JEU to increase its own generation by 5.5%. Practise of increasing tariffs for residential and business users at different rates is introduced
1992	The JEU reduces residential electricity tariffs by 10% and limit the increase on business tariffs to just 5%
1993	Tariffs are increased by 25% in 1993, followed by 11.50% in 1993 and 10.50% 1994

Source: ibid

Figure 7-7 now illustrates the annual contributions made by the electricity department to the relief of rates for the period 1952 to 1995. Notably, two things stand out: The first, is the extent to which contributions increased from the early to mid-1980s. During this period Eskom was in an over-supply

<sup>97</sup> South Africa used the British pound sterling until 1921, when the South African pound was introduced. South Africa adopted the rand in 1961; it replaced the pound at a rate of 2 rand for 1 pound.

situation and offered the city bulk supply discounts. Recognising that once Escom became the JEU's primary supplier, a way would be found to remove the discounts, the JEU accepted Escom's offer, but kept the Orlando Power station operational as an alternative supply.

*"We knew that if we shut down Orlando, the game was over and Escom would revert to the original tariffs, so we kept two boilers operational. This worked well, and we were even able to increase the discounts, until 1990. The electricity undertaking made large surpluses during this period."*  
Martin Pomeroy, City Electrical Engineer<sup>98</sup>

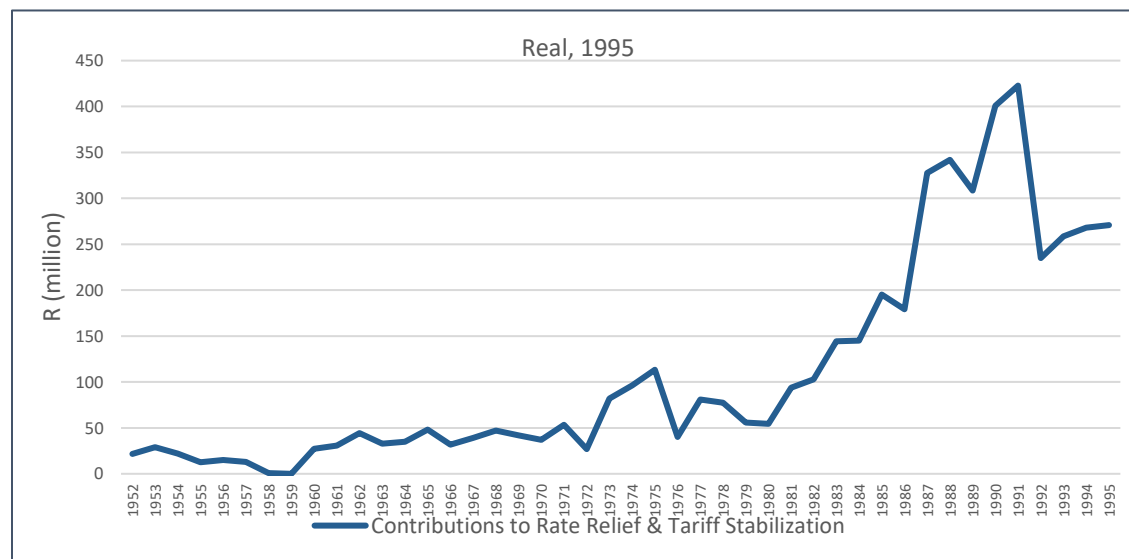


Figure 7-7: Annual Contributions towards Rate Relief from Electricity Surpluses for Johannesburg (1952 – 1994)

The second standout observation is the profound effect on the electricity surplus that occurred in 1992, when the city reduced residential tariffs and limited the increase on business tariffs. The surplus dropped in real terms (using 1994 as the base year) from R449 million to R234 million. The loss in revenue from electricity in 1991 was offset by a corresponding 68% increase in revenue from property rates (Johannesburg Municipality 1992, p.vi) (Figure 7-8<sup>99</sup>). The inevitable question thus arises: Given the prevailing operational environment, why did the city take the drastic and risky decision to reduce electricity tariffs? The answer is the evolution of Sandton - *"a nouveaux riche exemplar of peripheral urbanization"* - and Murray (2011, p.114) explains that this was not by design:

*"In 1967, at the height of apartheid, the National Party carved out two new municipalities, Sandton and Randburg<sup>100</sup>, in what at the time was the peri-urban periphery of Johannesburg.... this decision to create a separate local government at Sandton was primarily motivated by the mounting fear of losing citywide elections to the white political opposition, which had its strongest*

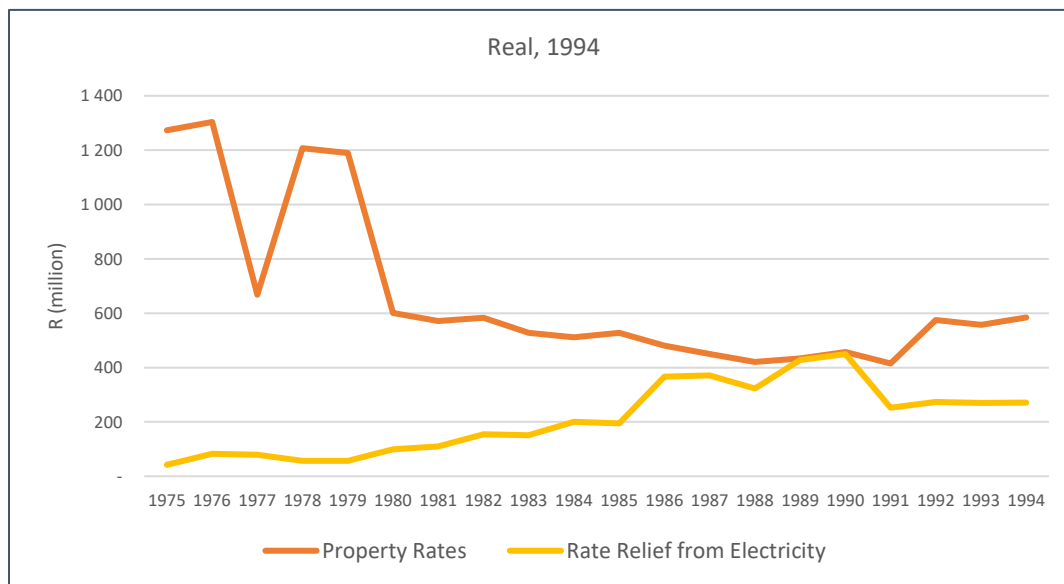
<sup>98</sup> Martin Pomeroy joined the Municipality in 1959 and moved to the electricity undertaking in 1979. He was the City Electrical Engineer from 1992-1994 and the GM from 1995 to 1996. Interviewed 27 January 2017

<sup>99</sup> The Financial Statements reflect the increase but provide no further explanation. The annual increase in the property tariff increased marginally from 3.97cents to 4.1cents in the Rand, providing little insight

<sup>100</sup> Randburg was staunchly Afrikaans and a NP stronghold, giving it autonomy would entrench NP support. This was not the case in Sandton, and the NP's motive here was to split the vote in a manner that would weaken the opposition's chances of taking control of the Johannesburg municipality.

*base of support in the northern suburbs.... In order to secure their own tax base, Sandton municipal authorities set out, with some animus, to compete against the Johannesburg central city for corporate clients by offering considerably lower property taxes rates, and relaxed zoning applications favourable to the expansion of commercial and retail development.*

In addition to lower property rates and relaxed zoning requirements, Sandton received its electricity supply directly from Eskom, at significantly lower rates than what was being charged by Johannesburg. The effect was that Johannesburg came under pressure from its anchor tenants, the city argued that it offered far superior infrastructure, all of which came at a cost. However, this was insufficient: *“there was a backlash from energy dependent consumers and particularly those who were close to the borders of Johannesburg where their competitive counterparts enjoyed the Eskom demand tariffs some 40 to 50% less than Johannesburg’s”*. To start, the exodus was not wholesale. Companies retained their offices in Johannesburg, but new offices and expansions located in Sandton and Randburg. Once the new offices were established, the entire company followed<sup>101</sup>. Democracy saw the demarcation of new municipal and provincial boundaries, Johannesburg absorbed Sandton and Randburg municipalities as well as several townships, most notably Soweto and Alexandra, to form a Metropolitan Local Council. A peculiarity of this new arrangement was that Eskom continued to distribute to Sandton and Soweto, while rates had to be equalised across the city - prompting the Sandton rates boycott in 1996; dealt with in the next section.



**Note:** The sharp drop in property rates revenue in 1977 was not explained in the annual financial statements, but doubled (nominal terms) the following year

Figure 7-8: Annual Contributions from Property Rates and Electricity Surpluses for Johannesburg (1975 – 1995)

<sup>101</sup> Meeting with Stan Bridgens – Director Technical Services, Johannesburg Electricity Undertaking. Employed at the undertaking 1958 to 1995. 5 September, 2016



In painting a strong numerical picture of municipal funding reliance on limited sources during this period, Figure 7-9 shows the extent to which electricity sales and property rates make up the bulk of municipal revenue. Indeed, a closer analysis (

Table 7-7) reveals that municipal functions were: 1) Operated at a marginal profit or loss (water and sewerage); 2) Heavily subsidised (transport and health); or 3) Almost completely subsidised (culture and roads) by property rates and electricity surpluses. Figure 7-10 shows the city's exclusive reliance on rates and electricity to provide functions for the period 1991 to 1994.

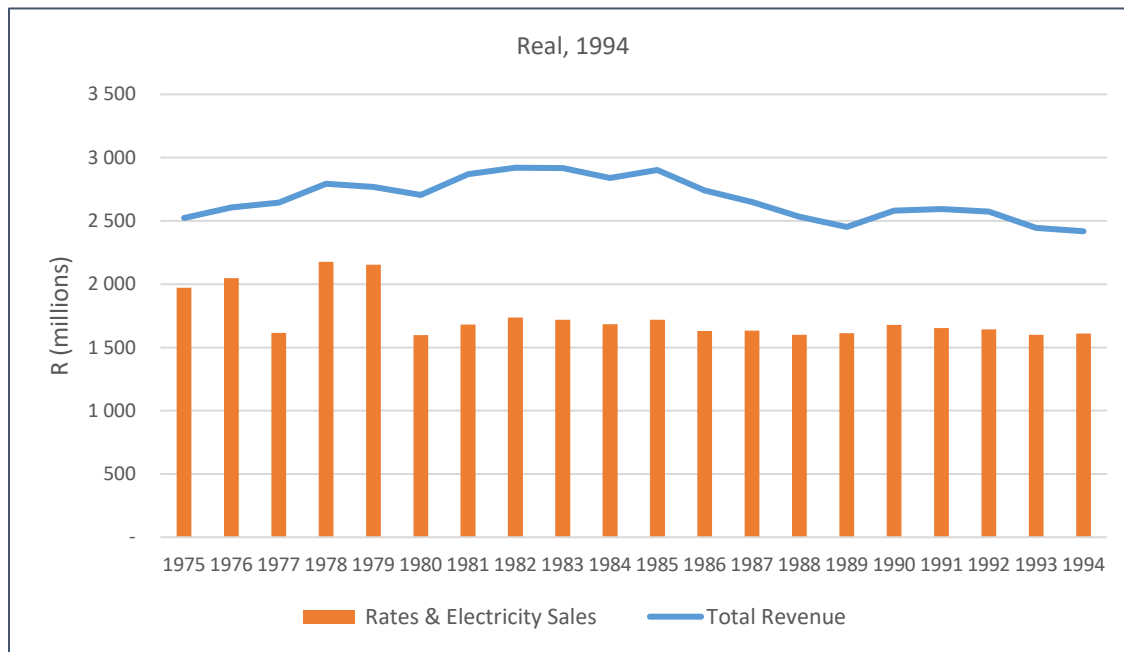


Figure 7-9: Contribution of Property Rates and Electricity Sales to Total Revenue for Johannesburg (1975 – 1994)

Table 7-7: Surplus / (Deficit) for Selected Municipal Functions for Johannesburg (1991 – 1994)

Service	Surplus / (Deficit) Millions – Real, 1994			
	1991	1992	1993	1994
<b>Marginal: Up to 20%</b>				
Water	17	-4	-2	-1
Sewerage	23	17	8	6
Gas	5	-1	0	4
<b>Heavily Subsidised: 20% to 60%</b>				
Health and Housing	-137	-103		
Transport	-47	-42	-38	-36
<b>Completely Subsidised: &gt;60%</b>				
Culture	-152	-175	-171	-175
Health and Housing			-105	-99
Roads	-153	-172	-152	-129

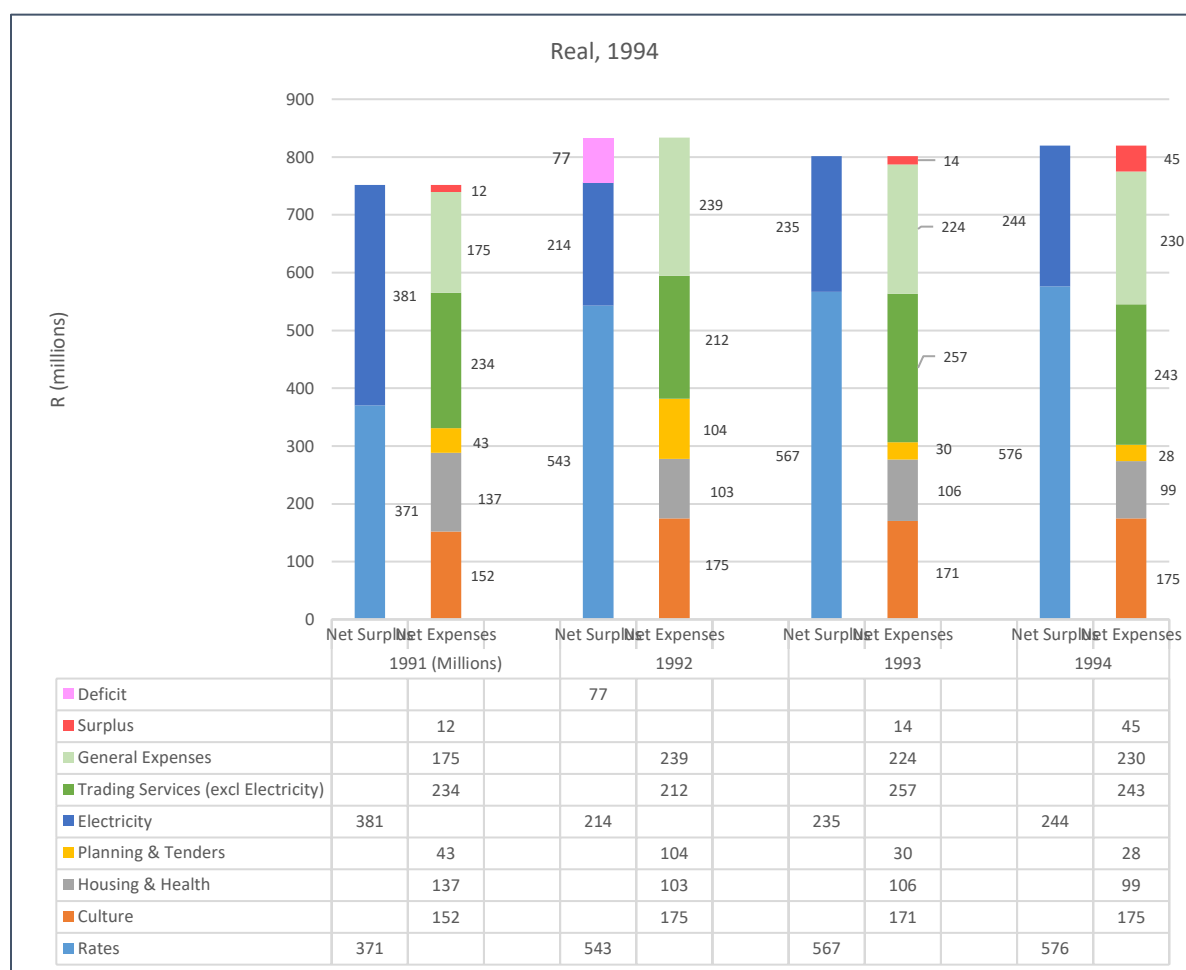


Figure 7-10: Aggregated Income and Expenditure Statement for Johannesburg (1991 – 1994)

More than anything, the long period under NP rule again demonstrated an escalating intransigence in shifting away from the practice of relief of rates on the part of municipalities – particularly given that the generation battle had been lost to Eskom – with the growing reliance on distribution revenue being made worse by national government’s ongoing dithering in critically addressing the challenges of municipal funding – which itself was overtaken by socio-political events in the latter part of the period, as the nation inexorably began to move towards democracy. Immediately hereafter however, are the concluding remarks on the period under current discussion, before then repeating this section’s process in the final time period – post-94.

#### 7.4.4 Conclusion and Second Critical Juncture

In terms of theoretical analysis, the period from 1948 to 1994 offers much for the historical institutionalist to ponder upon. Indeed, during this time, certain aspects of the relationship between municipal funding and electricity generation and distribution saw little change, whereas others went through significant turmoil, with examples of the latter including a critical juncture in the late 1960s as death-knell to

municipal electricity generation and the gearing up for another at the end of the period, in the country's transition to democracy – coupled with significant incremental changes throughout this timeframe.

Here the analysis commences with an examination of the path dependent process of relief of rates, which by the end of the period was referred to as 'cross-subsidisation' and warrants some reflection as both concept and reality. In building up to such reflection, the research found that the right to vote in municipal elections was only extended to white males who were property owners; and that both conditions were necessary<sup>[1]</sup>. Upon reflection, this arrangement then had two key outcomes: 1) Only a very small portion of the population (property owners) were contributing to municipalities' primary revenue sources; and 2) This small group of property owners had a direct influence over municipal policy, as they were the only ones who could vote and it was in any councillor's personal interest to appease their electorate. Reducing the said electorate's property taxes went a long way towards achieving this. Thus, 'relief of rates' was an apt description that clearly captured the *raison d'être* of the practice. Indeed, lower property taxes were likely to encourage property investments; and since this form of revenue collection was working well, the practise remained, and in fact expanded under the notion of increasing returns, even after municipal voting rights were extended to all white, male and female citizens within the municipality. Viewed in this light, there can be no implication other than that cross-subsidisation of municipal services was an accepted practice.

What is of particular pertinence when examining the practice of relief of rates from a municipal perspective however, is that when the time finally did come for municipalities to start delivering to their adjacent previously unserved black townships, both politicians and municipal treasurers joined their colleagues in the electricity department and cried foul; albeit that the latter had in fairness always opposed this practise, even though in this instance opposition to it was indefensible. Suddenly, under these circumstances, cross subsidisation was unfair and reflective pricing was what was needed; which in truth appears to be a mildly panicked response to the realisation of the cost and effort to service these areas after decades of neglect, coupled with an unsurprising knee-jerk reaction to decades of the "us and them" ideology of apartheid. By November 1989 the reality of the situation had sunk in and the AMEU sought to meet with national government and Eskom to confirm their commitment to the "Electricity for All" programme. And it is from this that the name change from relief of rate to cross-subsidisation became one of the outcomes.

Staying with the original notion relief of rates that dominated the majority of this period however, the research has found that this practise continued to accelerate under the process of a positive feedback loop throughout the period under discussion; with Figure 7-7 demonstrating this convincingly with little need for supporting explanation. What does warrant commentary though, is the consequence of the City's decision to reduce its residential electricity tariffs and minimise the increase on business tariffs, in response to the exodus of its residential, commercial and industrial client base to Sandton. The impact on the City's finances was devastating and the policy was reversed the following year when electricity tariffs increased by 24% (Figure 7-6). Here, historical institutionalists would normally account for the transition from stasis (negative) to amplification (positive), via the logistical S-curve defined by long periods of inactivity where pressure builds and then takes off - often overcorrecting - and shifting from a negative to a positive feedback loop. But in this instance, we have witnessed the reverse – a backward overcorrection to an initial seemingly progressive correction. In this, Williams (2012) reminds us that the positive

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<sup>[1]</sup> These conditions were relaxed shortly after Union in all of the provinces, except the Cape where it remained until the 1930s.

feedback loop endeavours to remain on its path, especially one that has been in place for decades, which was the case here. Indeed, shifting from a positive to a negative state is not straightforward and requires a clear “window of opportunity” for change, which in this case wasn’t present. He thus concludes that misdiagnosing events generally leads to much upheaval, effort and cost, but ultimately yields little. In this particular scenario for example, the marginal reduction of residential electricity tariffs and the limiting of business tariffs increases, while compensating for this through above average property tax increases, was never going to be sufficient to stem the outflow. In earlier chapters we saw how residents respond to excessive local taxation, regardless of whether it is real or perceived, which is either through evasion or migration to a municipality which is more affordable, as occurred in Johannesburg. In truth though, the high tariffs (electricity and property) were merely a contributing, and not the primary, factor. Albeit that cost may have played a role, residents were in fact fleeing the city centre due to political events at national level and rising crime levels in the CBD.

Finally, when examining drivers of change during this period, both incremental and punctuated change; with regards to the latter the research identified a critical juncture, namely the Margate Convention of 1968 that ended future municipal generation, however this event as has been shown was not an exogenous shock but the outcome of many years of pressure (incremental change) from Escom. This is particularly significant, because the identification of institutional change is the primary objective of the chosen framework.

Ultimately, changes and their effects over long periods of time can be difficult to identify, because of the variables involved and the varying size of incidents of change. One approach would be a “before and after” comparison, which accounts for (or excludes) punctuated equilibrium, depending on perspective. Nevertheless, if we consider Johannesburg through this “pre and post” prism, in 1948 it was a functional utility with a highly skilled and effective workforce, which was able to service its customer base and sell large quantities to Escom. And it had an aggressive expansion programme, with plans for a new state of the art 1 000 MW plant to come online before 1970. The Margate Convention changed all that however, and the JEU over a period of 20 years - the remaining lifespan of its Orlando and Kelvin power plants - had to transform itself from a utility to a distribution company, now forced to take its supply from one company, Escom. It did what it could, but it had to watch as its fortunes declined, while speculating about what could have been. Experienced staff (who could not be readily replaced) left, revenues shrank and the municipal treasury squeezed the utility as much as it could to maximise surpluses, due to the ongoing recession during the political turmoil of the 1980s. All of these point to being a function of drift “*changed impact of existing rules due to shifts in the environment*”, before finally Johannesburg had to come to terms with the new reality of “Electricity for All” – displacement “*the removal of existing rules and the introduction of new ones*”.

With the coming 1994 elections though, these changes were only precursor to the challenges that lay ahead - outlined in the next section.

## 7.5 Democratic Elections and Electricity for All (1994 – 2017)

### 7.5.1 Setting the Scene

The immediate post-democratic period was dominated by two pressing, but contentious issues. Pressing because there was universal agreement that they were a priority and could not be delayed, while political

ideologies amongst the stakeholders and the economic consequences of the different options would deliver vastly different outcomes. Once again, and as would be expected, Eskom and the municipalities locked horns. The first issue was the urgent need for Eskom and municipalities to meet the targets and commitments made towards national electrification. The second issue was the restructuring of the ESI.

### 7.5.2 The National Electrification Programme (NEP) and the New Regulator (NER)

By bringing together the technical and financial capabilities of the ESI with political legitimacy and support, it allowed the participants to take decisions that would be both politically acceptable and practically implementable (Bekker & Marquard 2008). Having served its purpose and in danger of compromising agreed outcomes due to the theoretical debates on the form of a future ESI, the NELF was disbanded in 1995 (Conradie & Messerschmidt 2000, p.314). NELF's work was consolidated into a final report which was presented to the GNU and highlighted the state of crisis that the ESI was in, most notably the distribution sector which needed urgent restructuring. Over 400 municipalities distributed electricity and Eskom serviced a further two and half million consumers directly, ranging from high intensity users (mines and smelters) down to indigent households. As many as 120 municipalities serviced fewer than 1 000 households and more than 90 had annual revenues of less than a million rand. The result was a fractured industry with too many tariffs, vastly disparate charges and varying service levels. Users in Gauteng paid between 9 and 17 cents /kWh whereas equivalent users in Mpumalanga (where most of the power stations were located) paid 23 to 32 cents /kWh. Surpluses from electricity sales were as inconsistent - 50% of the total were generated by the top four municipalities, the next 25% was distributed amongst 18 municipalities, with the final quarter being divvied up amongst the remaining 380 plus local authorities, almost all of which were operating their undertakings at a loss, meaning no surpluses but not necessarily that the revenue generated from electricity sales was not being used to pay for other functions. The report recommended the establishment of an electricity regulator to replace the ECB, that it be given wide ranging powers and be charged with overseeing the restructuring of the ESI, which in its first phase would see Eskom absorb the small and non-performing municipal undertakings. This would pave the way for the second phase, which would see the establishment of a limited number of (5 to 17) Regional Electricity Distributors (REDs) which was more feasible than the 400+ existing separate entities. Consolidating the EDI would achieve the long held objective of cost reflective tariffs, end cross-subsidization (relief of rates) and ultimately deliver a competitive ESI (Conradie & Messerschmidt 2000; Bekker & Marquard 2008; Galen 1997). Although seemingly sensible and undoubtedly in the national interest, the NELF reform recommendations directly challenged the vested interests of Eskom and the local municipalities and *"the controversial recommendations ground to a halt"* (Conradie & Messerschmidt 2000, p.320). The regulator (National Energy Regulator – NER) was however established on 4 October 1995, with ex-Eskom CEO McRae appointed as its first chief executive, and many key positions being filled by ex-Eskom personnel. All exemptions to regulations were removed from the Electricity Regulation Act as henceforth Eskom and all MEU's would report to the newly created NER. With so many Eskom people at the NER, there was little question as to where sympathies lay, an issue which became a source of contention for the AMEU.

A first order of business for NER, was the establishment of the Electricity Working Group (EWG) which was tasked with making recommendations on the future structure of the EDI. All stakeholders were involved (24 workshops in total) and a thorough analysis of the industry was undertaken. Many of the affected parties (Eskom, AMEU, Institute of Municipal Treasurers and Accountants) undertook their own reviews. Unsurprisingly, Eskom and the AMEU clashed (again) when the latter discovered that Eskom generation was charging Eskom's own distributors a lower tariff, through its wholesale electricity tariff

(WET), than the one being paid by municipalities. Eskom countered by insisting that municipalities do likewise and separate their electricity undertakings from the rest of their municipal services. The Electricity Restructuring Interdepartmental Committee (ERIC) was then set up by government to review the findings of the EWG. The stakeholder consultations undertaken during the NELF, EWG and ERIC processes, readily identified the issues (Galen 1997, p.1):

1. The EDI is fragmented, inefficient and needs to be rationalised to ensure financial viability to meet its responsibilities;
2. Electrification is a critical infrastructure development activity that must be prioritised;
3. The electrification programme, in its current format, is funded by cross-subsidies and the cost of serving new, low usage customers is estimated at R1.2 billion for the period 1995-1999<sup>102</sup>;
4. Tariffs needed to become cost based. To do so cross-subsidies would need to end, or if kept for them to be marginal. Electrification, funded through existing tariffs was permissible but had to be done in a transparent manner where the tax or levy on sales was easily identifiable by the consumer;
5. The practise of setting numerical electrification targets was deemed wasteful, inefficient and an ineffective approach to promote economic development or the equitable provision of services; and,
6. The ESI needed to separate generation, transmission and distribution. Only then would a competitive operating environment be created which would lead to cost savings and economic efficiencies.

Political ideologies and the vested interests of the various stakeholders made finding mutually acceptable action difficult. For example, the urgent need to reform and consolidate EDI was universal, but how? The creation of a national electricity distributor was favoured by some, whereas others believed that a small number of regional distributors, the so-called REDs, would be more efficient and more responsive to local concerns and interests. The boundaries<sup>103</sup> of REDs required careful consideration of ownership, asset valuation, regulation and human resources. The ERIC report and its recommendations was submitted to cabinet. In May 1997, after numerous revisions to address comments and concerns, cabinet approved the consolidation of the EDI into the maximum number of financially viable and independent RED's. (A Eberhard 2007; Conradie & Messerschmidt 2000; Galen 1997).

However, not all tiers of government agreed. The ERIC recommendation to establish RED's was immediately rejected by the South African Local Government Association (SALGA)<sup>104</sup> at its inaugural meeting, as it was viewed as a constitutional matter. Electricity and gas distribution, amongst others, were municipal functions protected by the supreme law of the land. SALGA's position did not deter national government, which in 1998 issued the Energy Policy White Paper which detailed government's intention to reform the ESI (Chapter 6.4.1).

Eskom's price compact, which reduced tariffs in real terms by 20% during the period 1992 to 1996, was about to expire. An analysis by Steyn (2001, chap.4) of the compact outcomes found that the original targets were not achieved, and although electricity prices decreased, they only did so marginally. Eskom did however succeed in its other (four) objectives of improving its financial and technical position, delivering on its electrification targets and promoting black employment within the organization. The electrification programme was starting to weigh heavily on Eskom's finances, as its original plan to target

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<sup>102</sup> The capital costs, which were separate, were estimated at between R1.3 to 1.7 billion / year

<sup>103</sup> It was concluded in the ERIC process that using provincial boundaries for REDs was not appropriate as nine would be too many and some would not be financially viable (Conradie & Messerschmidt 2000, p.317)

<sup>104</sup> SALGA replaced the United Municipal Executive

urban areas which had high a concentration of (more) affluent users had to be conceded to the municipal undertakings. Despite developing criteria to evaluate the financial and economic cost-benefit analyses of prospective projects, the need to meet its annual connection targets always took priority. For example, a review of thirty Eskom electrification projects found that more than 60% did not meet its internal evaluation criteria (Steyn 1996, p.5). As was the well-established norm of the ESI, cross-subsidisation was used to cover the shortfalls of the programme. Concerns about the wisdom of this practise were raised on numerous occasions, supported by large quantities of anecdotal evidence and academic research. - Electricity it was argued, while a necessary ingredient for economic development and growth, could not create it without other physical infrastructure components such as roads, water, sanitation and housing. This made the investment hugely inefficient and compromised other opportunities – see (Conradie & Messerschmidt 2000; Steyn 2001; Bekker & Marquard 2008; Galen 1997; Davis 1996) (Goldemberg et al. 2000, p.375). Such arguments had little impact and the programme continued unabated.

The ANC needed deliver on the RDP and could not afford to look a gift horse in the mouth. The conundrum it faced was that recognising that the ESI was delivering electricity at a significantly faster rate than what the organizations responsible for other infrastructure could deliver, was electrification to be delayed? Possibly not, but as Galen (1997, p.16) notes, better guidance was needed from national government:

*“What is the goal of electrification? To provide electricity for all or to support economic growth in the near and long terms?.....Currently, the answer .....is “electricity for all”. Yet the strategic vision contained in the RDP suggests that it is “also to support economic growth in the near and long terms”. ..... It does not seem feasible to pursue both goals simultaneously. This, however has become the policy by default and has led to confusion and inefficient delivery.....”*

The much higher levelised costs of rural connections also necessitated Eskom to strengthen its bulk infrastructure and extend its transmission networks and transformers. This was compounded by lower than forecast consumption, and in turn revenues. Low income household’s consumption was estimated at 350 kWh/month, but less than a third of this amount was used. Squeezed on both sides, Eskom needed additional revenue. With the price compact officially expired, Eskom started levying an implicit levy on existing electricity users, with a portion going to municipal undertakings, to fund the electrification programme. For a variety of factors, it was decided to move the next phase (II) of the electrification programme from Eskom to the Department of Minerals and Energy (DME). An evaluation of the programme for the period 1994 – 1999 found that it cost R8 billion, increased electrification from 36% to 66% nationally through 3 million connections, primarily in cities and towns (Borchers 2001, p.iv).

### 7.5.3 MEU’s Contribution to the National Electrification Programme

A meeting was held between AMEU, NER and Eskom on the 14<sup>th</sup> of February 1997. The first item on the agenda was Eskom’s recently, and unexpected, announcement of a 5% tariff increase, which Eskom CEO Morgan said was *“based on historical and statistical data which found Eskom to be an efficient distributor of electricity, which cannot be said of many of the local authorities”*. The AMEU objected on the basis that any increase on such short notice was problematic, as their end users needed at least a 6-week notice period. NER’s McRae accepted this and suggested that henceforth only one tariff increase per annum be allowed. On the topic of the R300m allocation made to MEU’s by Eskom to support electrification projects, Eskom presented the statistics in Table 7-8, but noted that many applications had been rejected as they were in Eskom distribution areas.

Table 7-8: Municipal Applications for Eskom Allocation to fund the Electrification Programme (1997)

Number of applicants	151
Number of projects	431
Number of connections applied for	339 000
Total value of claims	R960m
Average cost per connection excluding the service connection	R2 831

The R300m was an annual award for five years, which McRae (NER) said was a ‘gift’ from Eskom to level the playing field between itself and the MEU’s. The AMEU took immediate exception and rejected outright the notion that it was in any way a gift as the money originated from municipal users. McRae immediately retracted the term ‘gift’. Secondly, the AMEU questioned the fairness of allocating an amount which is less than the actual cost of a connection, as many municipalities were not able to fund the shortfall. NER enquired whether the AMEU would prefer a National Electrification Fund to which the AMEU council agreed. AMEU’s position was that the R300 million was an ineffective use of money, as 45% of the amount was funded from local government income and then passed back to them in the form of a subsidy, effectively halving the real contribution to local government. Whereas, Eskom could fund the full cost (averaging R3 500 / connection plus losses), compared to the municipal allowance of just R1 000 / connection. Models to unlock the situation were discussed. Not much came from this as McRae was abruptly replaced shortly thereafter. The National Electrification Coordinating Committee (NECC) was formed in April 1999, which was then absorbed by the Integrated National Electrification Programme from 2002, which was funded from the national fiscus (Bekker & Marquard 2008, 12–13) (Eberhard 2005b).

#### 7.5.4 RED’s (So Close, Yet so Far), ISMO and ADAM (Much of the Same)

##### The need to Reform EDI and the Regional Electricity Distribution (RED) Programme

*‘Major differences between the various stakeholders remain unresolved and government seems unwilling to face the reality that the creation of the REDs will almost certainly require a constitutional amendment that limits the role of local government in electricity distribution.’*

Eberhard (2005b)

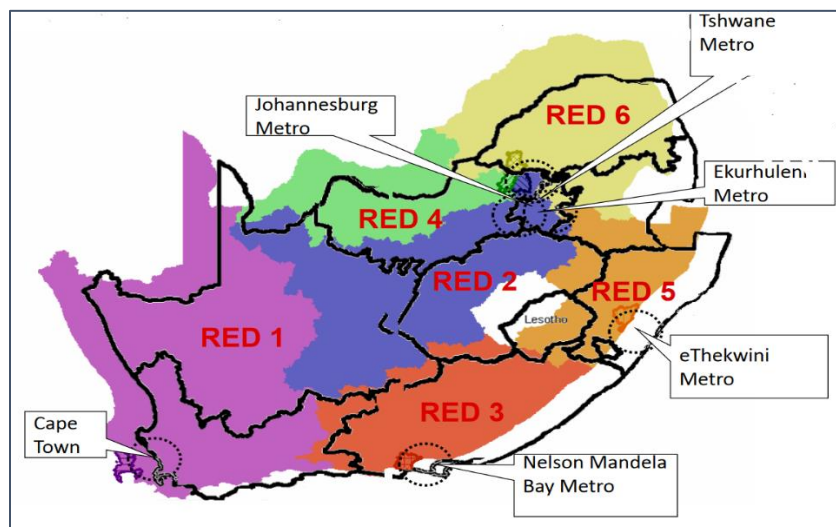
By 2005 there were 278 municipalities, and the more than 400 electricity distributors that existed before the new millennium had merged into ~180 units, which in the view of most and specifically national government, was still too many (DME 2002; Mlambo-Ngcula 2004). Having abandoned plans to privatise generation, government remained committed to reforming the EDI, as issues identified in the mid-1990s persisted.

Could consolidation and reform, under the existing legal framework, be achieved? The 1996 Constitution, Section 156 (1) and (2) assigns and lists the functions which municipalities have exclusive authority over, which includes electricity reticulation. Although, national and provincial government have the legislative and executive authority to see to the effective performance by municipalities (Section 155 (7)), the Constitution only allows provincial government to intervene, if the municipality “*cannot or does not fulfil its executive obligations.*” In 2002, the DME stated that in their opinion EDI restructuring could still occur without a constitutional change. The basis on which such a conclusion was based remains unclear, but suggests that national government believed that a political solution was probable. A view municipalities did not share if the outcome is considered. This approach compromised the programme from the outset



as municipalities negotiated knowing their participation was voluntary and thus from a position of strength (A. Eberhard 2007; Eberhard 2005b; Pickering 2010; Gaunt 2008).

In 2000, national government appointed Price Waterhouse Coopers (PwC) to develop a mutually beneficial and acceptable model for all stakeholders which addressed the contentious issues of boundaries, ownership, asset valuation, regulation and human resources. The report, meant to serve as a blueprint, was compiled by the EDI Restructuring Committee (EDIRC) (DME 2001) and proposed six RED's, each anchored by a metro to provide financial sustainability (Figure 7-11), supported by 57 recommendations to achieve the end objective. The blueprint was approved by Cabinet in 2001 and EDI Holdings, a state-owned entity, was formed in 2003 to resolve outstanding issues and manage the process. In early 2005, the President Mbeki confidently set June 2005 as the target date for the establishment of the first RED (RED's1), a pilot project jointly approved by Eskom and the Cape Town metropolitan government. The target was achieved, but on paper only. The stumbling block was Eskom, who having previously supported the programme, was unwilling to operate under the rules and provisions of the local government system<sup>105</sup>, which were different to those applicable to state owned entities. On this basis, Eskom resisted (refused) transferring its assets, customers and staff to RED1 control. To appease Eskom, the RED's were categorised as non-municipal entities, but unsurprisingly, this arrangement then became unacceptable to the City of Cape Town who stated that the nature and structure of the arrangement had fundamentally changed to its detriment, and it promptly pulled out and asked NERSA to revoke the RED1 distribution license and re-establish the status quo. All agreements were cancelled and RED1 was dissolved.



\*Provincial boundaries in black

Source: Eberhard (2013)

Figure 7-11: Six Wall-to-Wall REDs

EDI holding was instructed in 2006 by the DME to make RED's work, and in a presentation made by CEO Phindile Nzimande in June 2008, she believed that they were getting close: *"Never before has the*

<sup>105</sup> Municipal undertakings are subject to the Municipal Systems Act and the Municipal Financial Management Act (MFMA), whereas Eskom is a public entity and subject to the Public Finance Management Act (PFMA). The PFMA and MFMA are not consistent with each other

*environment for the establishment of the RED's looked so substantially promising".* Her optimism came with the caveat of ambivalent stakeholder support, emanating primarily from the voluntary nature of the restructuring process and the lack of enabling legislation. An example of the latter was demonstrated by the 2007 Electricity Regulation Amendment Act which empowered both the minister and the energy regulator to establish norms and standards, key performance indicators and required municipalities to ring-fence their operations and financial results. Depending how one interpreted the amendment, it either divided or duplicated the oversight role, creating confusion for the municipalities and compromising the role of the regulator. From 2006 over R1.2 billion was spent on reviving the RED's, but with little progress. Government finally threw in the towel and the RED's scheme was officially abandoned and EDI Holdings wound-up following a cabinet decision made on the 8<sup>th</sup> of December 2010.

Reforming the EDI, which had developed and was entrenched for longer than a century, was never going to be straightforward. The scheme itself and the perspective and vested interests of the primary stakeholders is summarised in Table 7-9. The failure of RED's however, the periphery ones aside, came down to three issues:

- How ownership of the REDs would be determined?
- How local government and Eskom would be compensated for their assets?
- Who would control the REDs?

The attempt to reform EDI took fifteen years, cost several billion Rand and yielded little. The real victims however were the physical municipal distribution systems. During this extended period of uncertainty, the owners of each distribution system (municipalities and Eskom), in being told that their assets would be transferred into a new structure for an unknown sum or for nothing - as many feared - adopted a policy of minimum maintenance. Not only were non-essential capital investments put on hold, preventative and common infrastructure suffered the same fate. Indeed, it was not uncommon to wait for equipment to fail before action was taken. The backlog of infrastructure maintenance was R27.4 billion in 2008, and by 2013 estimated at R35 billion (Figure 7-12) and growing at approximately R2.5 billion per annum, which the Minister of Energy (formerly DME) and NERSA continually kept referring to as a ticking time bomb (McDonald 2009; Eberhard 2000; Eberhard 2005b; Pickering 2010; Kessides & Maurer 2007; A Eberhard 2013; Gaunt 2008; Eberhard 2005a; A. Eberhard 2007; of Minerals & Energy 2001; DME 2002; Mlambo-Ngcula 2004; Savage 2008; Nzimande 2008a) (Yelland 2010).

Table 7-9: Summary of National, Local and Eskom Perspectives to REDs

National Government Perspective
<p>National government's motivation for creation of RED's:</p> <ul style="list-style-type: none"> <li>• EDI is fragmented in terms of investments, sharing of facilities, services and people development</li> <li>• The large number of distributors has resulted, over time, to non-standardised systems and approaches</li> <li>• Inequitable treatment of consumers- wide range of tariffs for similar consumers, unfair discrepancies between Eskom and municipalities. National policy (1998 White Paper), calls for cost reflective tariffs and to make subsidies transparent</li> <li>• Small and/or low-income user base has made many distributors operations loss making or bankrupt</li> <li>• 'Higher' municipal priorities lead to networks being neglected resulting in capacity shortages and supply interruptions affecting the economy</li> <li>• Experienced and skilled staff are lost to the private sector meaning key positions become occupied by under-skilled individuals with minimal prospects for comprehensive training and upskilling</li> </ul>

- Electrification performance unacceptably inconsistent nationally and Free Basic Electricity<sup>106</sup> is slow and inconsistent
- A regional distributor would accelerate electrification rollout
- Reduced regulatory oversight is a natural outcome of industry consolidation
- Municipal reliance on surpluses is contrary to government's objective of low tariffs and economically sustainable
- Creation of 6 REDs aimed at addressing the identified issues

#### **Municipal Perspective (Detailed analysis of the AMEU perspective is provided later on)**

The primary stumbling points for the municipalities:

- Boundaries: To sustain operations the right balance between marginal/loss making (low income households) and profitable (commercial, industrial and middle to high income households) consumers is required
- Metros did not want to absorb smaller MEU's as this would lead to further cross-subsidisation. A reduced surplus would result in metro residents having to pay more for municipal functions
- Although the EDI restructuring blueprint made clear provision for remunerating municipalities for their assets and giving them a share in the RED's, the municipalities remained sceptical and raised concerns as to how this would (could) be done equitably. A. Eberhard (2013b) identified *inter alia* the following unresolved issues:
  - Control over customers and credit control. Municipalities' most effective collection instrument to collect charges is electricity disconnection. Losing this could lead to far greater financial consequences than the surplus loss
  - Street lighting and municipal usage
  - Credit ratings of municipalities who lose the revenue stream
  - Conditions of service and servitudes

There was also significant internal ANC political opposition as local politicians feared a loss of influence and maintained that it was their role to provide developmental government. National politicians called for a broader solution to fix the EDI

#### **Eskom Perspective**

Publicly, Eskom supported RED's - it reconfigured its distribution into six networks to align with the proposed layout. In contrast to the municipalities however, Eskom played a more strategic game, allowing municipalities to lead discussions and raise issues. Eskom held back waiting to see whether its future role in the restructuring process was suitable and act accordingly. An example was cited above with RED's1. A further example was in 2002 when Eskom would not sign a voluntary co-operation agreement until its conditions were met (Section 7.5.5: AMEU Minutes February 2002).

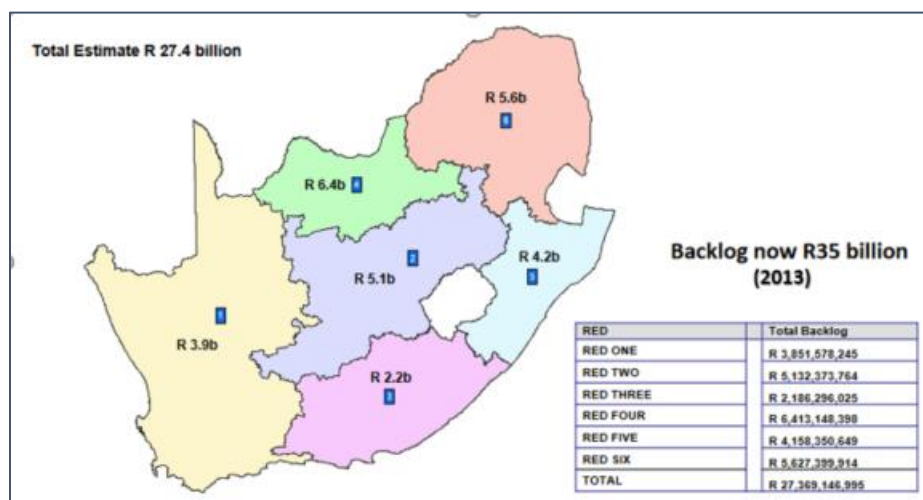
#### **Evaluation of the REDs Model**

Gaunt (2008) undertook a case study of EDI restructuring efforts under the REDs model. Although, at the time of the study, RED's had not officially been terminated the writing was on the wall for the proposed model and with the benefit of hindsight his evaluation insightful. Initially, it was believed that the issues (listed above) affecting the EDI would be addressed by REDs, as:

- Inequality between municipalities that derive revenue from electricity and those that did not would be reduced;
- Six REDs of roughly equal size would lead to the desired tariff reform;
- Consolidation would eliminate the need to rescue failing municipal distributors;
- Skills training and demographic representation would be easier to achieve;
- With just six distributors, the regulator could focus on the primary issues of reliability and quality;
- Six RED's was the same number of distribution units Eskom had prior to the national grid, suggesting it was the right number;
- Consolidation would lead to better management, reduced and more effective government coordination.

The RED's model aligned with the World Bank's recommendations (Kessides & Maurer 2007, p.7), who in their assessment believed that municipalities were not sufficiently able to run technically complicated and capital intensive networks, and raised the practise of diverting electricity distribution surpluses away from maintenance to fund other services as a major risk. However, Gaunt's evaluation found that international examples of EDI restructuring from the mid-1990s had yielded mixed results and had certainly not delivered the leverage expected. That the greatest economy of scale was achieved by utilities with about 20 000 customers and that most larger utilities did equally or less well, but never better. Utilities that went across (water and sewerage) were likely to do better than the ones that went deep i.e.: single service large base. This finding is supported by the ability of small MEU's under apartheid to have serviced the white inhabitants of their towns profitably for decades. The second motivation for REDs was to ensure that each one was financially sustainable, implying uniform tariffs and no cross-subsidisation. However, the loss of surpluses, especially for the metro's, who relied on them to fund electrification and other municipal functions, only meant that municipalities would tax RED's electricity distribution. Finally, municipalities do more than just supply electricity, they provide street lighting, traffic lights etc. Economies of scale already exist in this integrated municipal system and removing a section from it would create additional transaction costs. Gaunt provides additional evidence and concludes by stating that initial assumptions of the benefits of RED's may have been invalid or no longer relevant. For example, electrification occurred despite the failure of RED's. Recognising that continuing to do nothing was not a viable option, he suggested improvement through incremental change

<sup>106</sup> National Government introduced Free Basic Electricity in 2004, which provided poor households with 50kWh/month allowance funded by National Treasury



Source: A Eberhard (2013)

Figure 7-12: Estimated Refurbishment and Maintenance Backlog of EDI in 2008

Government continued to entertain notions of reforming the ESI as per the pronouncements made in the 1998 Energy White Paper. In what can only be described as *déjà vu*, in the 2010 state of the nation address, President Zuma, under pressure to resolve the electricity supply shortages, announced the creation of an inter-ministerial committee on energy. The committee would *inter alia* develop an Integrated Resource Plan (IRP); facilitate the long-awaited participation of Independent Power Producers; keep electricity tariffs affordable for the poor; the creation of the Approach to Distribution Asset Management (ADAM); as well create an Integrated Systems Operator (changed to Integrated Systems Market Operator or ISMO to better reflect its role) - “We will establish an independent system operator, separate from Eskom Holdings.”

#### Approach to Distribution Asset Management (ADAM)

With the RED’s dead, EDI Holdings was absorbed by the DoE in April 2011, inheriting the issues the RED’s was set up to resolve. In November 2012, Cabinet approved the DoE’s ADAM programme which would work with municipalities to address the high backlogs of maintenance and refurbishment of their distribution networks, but due to the enormity of the task a phased approach would be adopted. National Treasury re-allocated R320 million of the funds not utilized by EDI Holdings to DoE to initiate Phase 1 or the “Mini-ADAM”, which would target nine MEU’s (seven municipalities and two metros). Updating parliament on the progress of mini-ADAM in November 2013, the SALGA representative explained that the majority of the selected MEU’s did not have the financial or human resources to identify and develop high level electricity master plans to normalize their networks. The ADAM programme, it was emphasised, was not there to provide grant funding, but a holistic approach to get MEU’s to understand, address, manage and monitor the identified issues. With regards skills shortages, ADAM was encouraging better skilled metros to adopt a municipality to provide training and know how. For finance, Treasury had been approached, by SALGA and COGTA, to identify suitably appropriate financing mechanisms (A. Eberhard 2013a). In October 2015, the Department of Planning, Monitoring and Evaluation when reporting on DoE progress of the strategic framework, reported that 4 of the 9 mini-ADAM projects had been completed

and the remaining five were progressing well (Presidency 2015). At the February 2016 update to Parliament, the DoE stated that the mini-ADAM report was being finalised and would be released by May 2016 (PMG 2016b). This deadline was not met and at the next visit to Parliament (3 May 2016), the DoE representative stated: *"The close out report of this mini-ADAM will be submitted by May 2016"*, presumably later that month (PMG 2016c), meaning yet another session in Parliament where the programme could only be discussed in general terms. The 2017 visit by the DoE to Parliament raised the urgent need for the maintenance of the national distribution system, estimated to have increased to over R80 billion. The shortcomings would be addressed by the ADAM programme, which would be informed by mini-ADAM experience<sup>107</sup>. However, the DoE representative provided no programme or budget details (PMG 2017b).

In September 2017 (PMG 2017a), the DoE, NERSA and Eskom briefed parliament on the state of the EDI. From the briefing notes, two discussion points are of interest. The first, and rather curiously, was that local government was not present and were represented by the DoE. The second, was the vastly divergent standpoints of the DoE, NERSA and Eskom. Presenting first, the DoE stated that there were 182 municipalities and Eskom, with a revenue split of 42% and 58% respectively. The EDI faced massive infrastructure problems and raised the following items affecting the sector: 1) Bulk purchases by an increasing number of housing estates is affecting margins; 2) Increasing urban migration, leading to higher demand in urban areas, causing overload and illegal connections; 3) High income households are generating their own power and switching to other energy forms; 4) The view of municipalities that their constitutional authority to solely distribute electricity was undermined by Eskom and questioned NERSA's licensing process; 5) Large users migrating to Eskom supplied areas to take advantage of lower tariffs; and, 6) The large debts owed by municipalities to Eskom. The DoE then reiterated the urgent need to address the municipal maintenance backlog, which would now require an innovative solution as Treasury was no longer able to provide additional grants and tariff increases were not an option. Stakeholder discussions led to a proposal under the ADAM funding mechanism whereby a central loan facility would raise capital at the national level and serviced by the 5% to 8% earmarked in the tariff for maintenance, thus guaranteeing repayment. - The DoE had initiated talks with international development finance institutions to determine its viability (le Cordeur 2017b). A final item raised at the briefing was an EU funded smart grid study where the objective of the pilot is to develop national policy. Eskom presented next, and immediately retorted that the constitution was clear that distribution was not exclusive to municipalities. Eskom went on to say that there had been rezoning<sup>108</sup> which had caused an overlap between municipal and Eskom distribution boundaries, the municipalities expectation for Eskom to enter into a service level agreement to operate, was in their view, unnecessary as they are a licensed distributor. Eskom informed the committee that it had complied with the MEU's request to decrease the number of tariff categories to municipalities, there were now 3 (11). A concern for Eskom was another annual decrease in sales, compounded by the late (non) payment by municipalities who were charged interest at prime + 5%, 15 days after invoicing. Eskom had recently revised the terms by reducing the interest to prime + 2.5%, 30 days after invoicing but it was too soon to report on the impact of these changes. NERSA presenting last, stated that although the municipal tariff allowed for 6% to be invested in maintenance, most municipalities did not do this. A major obstacle for NERSA was the poor state, and often failure, of MEU's

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<sup>107</sup> The final mini-ADAM report was not available on the DoE website, indeed no mention of the programme was found on the website. Attempts to source the report were unsuccessful.

<sup>108</sup> It is unclear from the meeting notes who instituted the rezoning, whether it was an internal exercise and whether Nersa and/or the municipalities were involved

to submit mandatory reports. NERSA closed by stating that municipalities had to change their funding models as high-end electricity users were increasingly generating their own electricity or switching to other forms of energy.

The sheer lack of progress since 2011 is astounding. Knowing from 2008 that the capital investment backlog was growing at R2.5 billion per annum and of national urgency, the DoE took the better part of four years to complete mini-ADAM and spend a paltry R320 million. During this period the backlog ballooned to R80 billion in 2017 and the DoE was still referring to mini-ADAM and considering innovative finance mechanisms. Eskom's direct assault on the MEU's sole distribution rights within their area of jurisdiction, suggests that all bets are off. Indeed, the Margate agreement is 48 years old and may no longer apply? (Section 7.4.2 – June 1969)

### Integrated System Market Operator (ISMO)

Eskom as a vertically integrated utility which generates, transmits and distributes, has always managed and controlled South Africa's electricity system, and the function it serves as a systems operator is not independent (Pickering 2010). The publication of the ISMO Bill on the 13<sup>th</sup> May 2011 was going to introduce competition by creating a level playing field for all ESI participants. A new state-owned entity, which would take over necessary Eskom assets, would buy electricity from generators to sell to customers, showing them prices from which they could choose. The Bill came under a significant amount of criticism for focussing too closely on encouraging investment in generation to overcome power outages, without adequately addressing fundamental issues. For example, the Bill did not state who would own and maintain the grid and what steps would be taken to ensure that there would be no Eskom or political interference (see - Steyn 2013; Gulati & Saliem 2012; Eustace 2012). However, the entire industry (outside of Eskom) agreed that the creation of an ISMO was urgent and necessary and had to proceed even if in an imperfect state. For a truly competitive and transparent market, it was essential that Eskom lost control of the national power dispatching function, which balances supply with demand, as Eskom would always be likely to favour their own power generation over that of independent power producers (IPP's) (IPP's)(Pretorius 2012). Even with universal support, the Bill kept stalling in Parliament. New hope abounded when the State President made a renewed commitment to the Bill during his state of nation address in 2014, confirmed some months later by a senior representative at the DoE stating "*vigorous attention is now being given to the establishment of the operator's office to implement independent power supplies*" (ParlyReportSA 2014), followed by a formal statement from the Department that the "*Bill was undergoing refinement*" (DoE 2014). The Bill never made it to Parliament, which the Minister of Energy (Martins) subsequently admitted to blocking. Market commentators speculated that Eskom influenced this action and finally succeeded in killing the bill. This hypothesis is both plausible and probable. Citing the fragile status of Eskom, government officially withdrew the ISMO Bill to allow Eskom the time and space to stabilise its power plants.

*"The ISMO Bill in its current format is off the table. There will be a new bill that will be developed that is fit for the current situation and not create any instability within the electricity supply..."*

Dr Wolsey Barnard: Acting Director General, DoE February 17, 2015.

No pronouncements on a new Bill had been made by the DoE by the end of 2017.

### 7.5.5 Democracy and the Evolution of the AMEU (1994 – 2012)

*Unless stated otherwise this section is a transcript of AMEU minutes, conferences and internal documents, providing an internal view of the MEU's response to national government's attempt to implement RED's. Note: the format MonthYY (February 1997) is an AMEU meeting. External meetings are noted as such.*

In 1994 a meeting<sup>109</sup> was held between UME, Eskom and AMEU to discuss municipal tariffs. It was a repetition of the AMEU's standpoint articulated in such detail in the 1930s (Section 7.3.1). The AMEU agreed that as an essential service, electricity should be sold at cost - but were unable to do so due to the demands made on them by their own municipalities - and unless an alternate revenue source was made available by national government, municipalities had little option but to maximise surpluses from trading services. The AMEU proposed its long-held view, that the practise continue, but done in a transparent manner by separating the charge and reflecting it for what it is – a tax. To improve relations, Eskom agreed to allow AMEU representation at the Eskom tariff committee. The AMEU then pointed out that as per Electricity Act (1941), municipalities were entitled to have a 50% representation in the composition of the ECB. The creation of a new regulator, to replace the ECB, which functioned at the time as the interim regulator, meant that the municipalities would lose the right to govern and regulate their own income from supply of electricity. Thus, the AMEU would support the creation of a new regulator under the same arrangement. Finally, the AMEU agreed in principle to a national tariff structure on the condition that a working model was developed first.

February 1995: The AMEU appointed consultants to conduct an analysis of Eskom tariffs. The objectives of the study were not stated, but seemingly it was to start preparing for any requirements that the new regulator might impose. Indeed, documents developed for the NER works groups which were about to start, included: 1) The development of cost reflective tariffs; 2) The introduction of an upper limit for surcharges and surpluses, 10% was proposed as a reasonable number; and 3) Tariff subsidisation needed to be ring-fenced to make it transparent, cross-subsidisation limited to fair and reasonable amounts, and eliminating the practise of tariff increases to cover revenue shortfalls.

September 1995: For the mooted restructuring of the ESI, the AMEU council meeting was used to discuss and, where possible, come to a common position on issues being discussed within the industry. There was unanimous agreement that: electricity network boundaries and technical considerations should not be artificially constrained by political boundaries; that government finalise the country's energy policy framework and define the role of ESI's in licensing and regulation, as a matter of urgency; and, that where possible, issues be resolved independently of the ESI restructuring process. The first, was the development of a cost of supply methodology to rationalise national tariffs structures and identify cross subsidies / rebates / levies to the level playing field in the distribution industry. The second, was the establishment of a national electrification funding mechanism to work on an equitable basis to electrify all areas.

February 1996: The AMEU responded to the NER's Electricity Working Group's Report issued November 24, 1995 on the restructuring of the ESI. The AMEU felt that multiple issues had not been properly

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<sup>109</sup> This meeting accurately captured the state of uncertainty which existed under the old guard of the ESI, which could not be certain of what the future held. Issues were raised without necessarily expecting resolution but rather an attempt to gauge where their counterparts stood. It also presented an opportunity for concessions or agreements, which under normal circumstances were unlikely, such as AMEU representation in Eskom committees or tariff concessions

considered. Their response is summarised in the Table 7-10 below. On the number of RED's this needed to be based on the maximum number that could operate viably from inception.

Table 7-10: Summary of AMEU Response to NER Work Groups

Finance	Structure
<ul style="list-style-type: none"> <li>Continued access by local government to trading surpluses from MEU's needed clarification</li> <li>How trading surpluses were appropriated in relation to specific local governments needed to be quantified</li> <li>A distinction between urban and rural electrification was required, the latter seen as a national responsibility</li> <li>Financial viability of regional undertakings had not been rigorously defined and demonstrated</li> <li>An ESI funding mechanism was of utmost importance and further clarification was required</li> <li>Special customers were listed but not defined. If serviced by the distribution network, wheeling arrangements and charges needed to be defined</li> </ul>	<ul style="list-style-type: none"> <li>Benefits of introducing competition had not been fully demonstrated</li> <li>Model needed immediate finalisation so that it does not impact on existing operations and programmes</li> </ul>
Governance	Transition
<ul style="list-style-type: none"> <li>NER board representation and methodology needed to be defined, with appointees close to the customer –this was not clarified in the report</li> <li>Autonomy, accountability and responsibility of the regional management was not properly addressed</li> </ul>	<ul style="list-style-type: none"> <li>A timeframe for the legislation process was needed as well as any new structures to be introduced</li> <li>Existing staff members should not be prejudiced by the introduction of new structures</li> </ul>

The AMEU at the same time sought legal opinion to confirm that the clauses in the constitution made it impossible for national government to remove reticulation from municipal funding.

On the 14<sup>th</sup> of February 1997, the AMEU executive council met with the NER. With regards ESI restructuring, the AMEU noted that as over a year had passed since the EWG completed its report, it appeared that there was no strong desire from national politicians to restructure the industry. McRae, who had left Eskom and was heading up NER, expressed the opinion that government would still act, but ESI and tariff restructuring needed to be done simultaneously. Howard Whitehead (AMEU) put forward an alternative set of restructuring proposals. The AMEU believed that it would take a brave government to restructure the industry in a "big bang" approach, which would have the following consequences: 1) The perceived / real sources of income raised by local government from electricity; 2) The pressure from local government and Eskom unions; 3) The conditions of service; 4) The ensuing increased costs to existing Eskom customers; and 5) The apparent unwillingness on the part of Eskom for ESI restructuring. In Whitehead's view these factors had impacted national government's will to act. Furthermore, attempts to force change would not only go against the country's democratic principles, but probably the constitution. On this basis, the AMEU suggested that it would be more effective if the industry participants worked together to develop a programme to remedy the problems of the system, namely tariff and electrification funding inequities, unlimited contribution to municipal services and diversity of tariffs. Two approaches were proposed. The first, a market-based approach, would see electrification funded on an equitable basis by allowing supply and demand to set the tariffs. These economic forces would cause the restructure to take place, whilst setting a phased in cap on the contribution to municipal services. A move to standardised tariffs could be regulated. The second, would use a phased approach to standardise tariffs nationally, either equal to Eskom tariffs (as they had the biggest customer base) or according to another agreed upon methodology which would derive an appropriate rate for the different user groups.



Electrification would be funded from borrowings which would be met from capital charges on the operating budget and the books of every local authority would be balanced at the input end. This approach would require regulating the costs of all distributors and a phased in capping of the contribution to municipal services.

NER responded by saying industry needed to continue looking for solutions and government's indecision was as much the fault of industry, as it proposed two different models. In addition, the NER board was facing a lot of political opposition to the ring fencing of municipal electricity revenue, but a final decision would be taken by 30 June 1997. The AMEU was also seeking a position on the practise of ring fencing and had taken the matter to the Institute of Municipal Treasurer's and Accountants (IMTA), who would be providing them with guidelines, but as everyone was aware the structure of tariffs and the structure of the ESI were insuperable. In closing, NER stated that only 60 Municipalities had submitted their NER statistics returns for 1995, and only two municipalities present at the meeting had submitted their returns. The AMEU undertook to contact its members and ask them to submit their returns by 15 March, 1997.

March 1997: Eskom informed the AMEU it had decided not to include it at its tariff council meetings. On the issue of ESI restructuring the council resolved to co-operate with the newly formed SALGA. MM would be appointed to advice on the approach and the role that the AMEU could play in the new structure.

August 1997: The council resolved to accept the ERIC ESI restructuring report presented at the DME and SALGA workshops which was to be presented to Parliament to guide them on the creation of RED's. The AMEU noted its dissatisfaction in the disparities in Eskom transmission pricing and would advocate for the creation of a national electrification fund.

February 1998: As no formal announcement on ESI restructuring had been made, the council resolved not to take any further action. It was felt that a presentation made by NER to national government to highlight the crisis in which the industry was operating had been ineffective. The AMEU ESI committee had reviewed the final report<sup>110</sup> submitted by MM and had found it to be poor but would not act.

March 1998: It was reported that the ESI restructuring programme had lost its leader and it was believed that the programme had stalled. The AMEU decided to make representations to NER and government on the urgency to proceed as there was an urgent need for the two to find common ground. An illustration of the crisis was the increasing number of municipalities defaulting on their payments to Eskom. Plettenberg Bay had taken the decision to transfer its business to Eskom. It was also reported that Eskom did not support the idea of a national electrification fund.

January 1999: The AMEU noted that the Energy White Paper which had just been released, the sections on RED's (Section 7.1.3.3); Transitional Structure (Section 7.1.3.4); Local Authority Rights with respect to Electricity Distribution (Section 7.1.3.7); and Electricity Sector Governance (Section 7.1.7) were contrary to the proposals<sup>111</sup> put forward by SALGA and the AMEU. The meeting also noted that NEF's application for funding exceeded R700m but only R300m was made available.

August 1999: It was brought to the attention of the AMEU that Eskom viewed itself as a service authority, and some councils had entered into agreements with Eskom, where they would receive a royalty based

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<sup>110</sup> The report is not available. A copy was not found at the MM library or in the AMEU archives

<sup>111</sup> The minutes of the meeting do not provide the details of the proposals submitted to DME by SALGA and AMEU

on Eskom electricity sales within their municipal boundaries. The AMEU committee did not have sufficient information to form an opinion but felt that the manner in which Eskom had gone about this was not open or transparent. It was recorded at the meeting that the NER had raised concern that the Municipal Structures Amendment Bill, which authorised local authorities to set their own electricity tariffs, would lead to a proliferation of tariffs. The opposite of what was trying to be achieved under the proposed reforms.

March 2000: in view of the possible amalgamation of MEU's into regional distributors, AMEU discussed the importance of ring-fencing finances. A question posed at the meeting was: If AMEU supported RED's, how would they advise municipalities to deal with issues surrounding revenue and trading surpluses?

In June 2000, PwC released the eagerly awaited ESI restructuring report<sup>112</sup>, which put forward 58 recommendations to achieve the reform objectives. Whitehead, an AMEU honorary member and on the SALGA ESI technical working group, published a paper at the 2000 AMEU Proceedings, titled *"Restructuring of the EDI"*. Noting that significant progress had been made to narrow the gaps which existed between the preferred approaches of Eskom and SALGA, but that *"the ultimate decisions lie in the hands of the politicians both at national and local level or sphere."* His paper articulated SALGA's position by providing an explanation for each of the 15 (of the 58) recommendations which were contentious from their perspective. The most pertinent recommendation are summarised, followed by SALGA's response: (for the full list and detailed explanation refer to Whitehead (2000)). **Recommendation 6:** National government would hold a 'golden share' in each of the REDs. Local government was questioning this recommendation as it gave national government certain rights, most notably that REDs could not sell shares (to whomever it may be) without national government approval. SALGA did not object to the principle of a golden share, but to how this authority would be exercised. Given that local government has been mandated by the constitution to reticulate electricity, then it would follow that the golden share reside with them; **Recommendation 12:** Assets were to be valued upon transfer, either on the basis of a relative depreciated replacement cost or discounted cash flow, depending on which was most appropriate. SALGA found this to be reasonable but felt they could not commit to one or the other and needed to examine each in practise first. A major concern for SALGA was that MEU's, even though SALGA had advised them strongly not to do, were likely to delay maintenance and upkeep while the programme was being decided, and this would reduce the value of the asset<sup>113</sup>; **Recommendation 19:** Retail competition needed to be introduced as a priority. SALGA did not object to competition but called for a longer transition period, as MEU's will would need time to adjust to the new operating environment; **Recommendation 24:** The regulation of the EDI needed to be a combination of national and local arrangements: SALGA agreed with the recommendation but felt PwC had done insufficient work in this area and more detail analysis was needed to ensure that there would not be an overlapping of responsibilities and confusion; **Recommendation 30:** Tariffs to low income households must be below the cost-reflective rate. SALGA's view was that although necessary, this was a welfare issue and needed a political solution, dealt via a national indigent policy. The purpose of the restructuring was to reduce and even eliminate cross-subsidisation; and **Recommendation 56:** Licenses, agreements and other legal instruments necessary for the established REDs should be drafted under the co-ordination of the transitional structure. SALGA's view was that a single service delivery agreement for all municipalities

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<sup>112</sup> The report, on the whole, was adopted by the DME in February 2001 as the strategy and blueprint to reform the sector.

<sup>113</sup> This ultimately was the case. Municipal assets would be valued to determine their shares as a percentage of the RED. Fearing that there would no financial compensation for their assets there was no incentive to undertake anything more than basic or emergency maintenance – Interview with S Bridgens and W de Beer

within the REDs would be unworkable as each municipality's needs would be different and the result would be that the large municipalities would dominate.

July 2001: SALGA, under increasing pressure from its members to ensure that their financial interests would be protected agreed to write a letter to the Minister at the DME to suspend the EDI restructuring programme until the outcome of the financial impact study had been completed. Municipalities were also calling for greater transparency from Eskom and wanted to see them charging their distribution areas the same transmission tariff to the one levied on municipalities.

February 2002: The technical committee provided an update on the progress of the EDI programme: 1) Eskom had still not signed the voluntary co-operation agreements with the MEU's and would not do so until its conditions were met; 2) DME believed that restructuring could still occur without a constitutional amendment; 3) SALGA is against moving electricity distribution from Schedule 4B to 4A of the constitution, as this had the potential to degrade the security basis for bank loans; 4) SALGA's financial impact study found that municipalities would need to be compensated by R4.3 billion for the loss of income resulting from the EDI restructuring, and a further R2.2 billion to ring fence their electricity departments; 5) Municipalities would need to retain the right to levy a surcharge on electricity distribution; 6) On the basis of the PwC model, municipalities would become the minority shareholders in all REDs. In light of the above, the AMEU's resolved to advise their members that in preparing for REDs all MEU's needed to corporatize and ring-fence their operations.

April 2003: The technical committee confirmed that Eskom had restructured its divisions to match the proposed REDs boundaries. A statement issued by the DME on REDs, delivered a mixed bag. The first two comments were supportive, but the third less so : 1) National government supported the notion that all municipalities own REDs shares; 2) Provision for a municipal levy on electricity would be incorporated; 3) In the opinion of the DME, terminating "cutting" electricity supply as a means to enforce payment of other municipal debts was not a sound legal vehicle. The committee took note of the DME's position. It was reported that the AMEU had entered into a formal cooperation agreement with SALGA and that almost all municipalities supported the introduction of Free Basic Electricity.

March 2004: The introduction of the Municipal Financial Management Act (MFMA) removed many of the perceived advantages of EDI, and the EDI bill had not shown any signs of progress.

October 2006: As a result of the failure to launch REDs<sup>1</sup> in Cape Town, the AMEU reconsidered its position on the REDs, as follows: 1) REDs would need to be municipal or public entities; 2) Support for the 6 REDs model was confirmed; 3) A firm legislative framework was needed for restructuring to occur in an orderly and equitable manner; 3) Tacit acknowledgement would be required from all stakeholders that reticulation and distribution meant the same thing, and that a 132 kV supply cut-off<sup>114</sup> was accepted; 4) All REDs would have to be regulated by NERSA; and, 5) All customers would need to be included in the REDs scheme and Eskom could not supply customers privately or separately. Further, AMEU sought a legal opinion on the distinction between a public and a municipal entity (PE & ME), which found that a PE reported to national government, whilst a ME reported to local government. A PE was created in terms of the Companies Act and its chairman was appointed by national government whereas local government

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<sup>114</sup> All users taking supply at under 132kV fell under REDs and users above the threshold were supplied directly by Eskom

appointed the chairman of ME. Finally, national legislation can deem a ME to be a PE. In an unexpected turn of events, SALGA informed the AMEU that it no longer required input from the AMEU.

October 2007: The smaller municipalities had become sceptical about the EDI process. SALGA, however, publicly reaffirmed its support for REDs.

October 2008: An announcement by government that it had decided to change the constitution to allow for REDs, was discussed at length. The AMEU decided that it should not take an official stance or express an opinion, but if pressed they would support SALGA's position.

March 2009: SALGA issued a position paper on EDI restructuring, network maintenance and refurbishment which helped foster consensus in local government on the nature of the relationship between REDs and municipalities. SALGA submitted a list of consolidated issues to EDI Holdings which needed to be resolved before any further restructuring could take place.

October 2010: The AMEU was advised by EDI Holdings that energy security had overtaken EDI restructuring as a national priority, which was not expected to be resolved before 2017<sup>115</sup>. Dr de Beer, the CEO of EDI Holdings, however encouraged municipalities to continue consolidating their MEU's operations based on long term concession agreements

In a frank post mortem presentation at the 2011 AMEU conference of the EDI restructuring programme by ex-CEO of EDI Holdings (De Beer & Waters 2011), Dr de Beer lamented the lost opportunity. The state of the distribution network, bar a few pockets of excellence, had been neglected and the longer this continued, the more expensive and the greater the economic and political consequences. He conceded, that the EDI restructuring efforts had yielded some positive results, but largely with the better resourced metros and Eskom distribution, who had acted to reassess the state of their assets. It was the smaller municipalities, the very ones that EDI Restructuring was supposed to benefit by creating a more balanced and equal industry for all users, who had received the short end of the stick. The need for a constitutional amendment was undoubtedly the elephant in the room, however, in his opinion this was not the sole reason. There were other issues which led to the failure of RED's: **Political Will:** The DoE (now split from the DME) always publicly stated its commitment to the process, but contradicted this by reducing the funding allocations to a level which made meaningful progress unattainable; **Legislation:** The required enabling legislation, which could have been leveraged from national policy objectives, was not created; **Enforcement:** NERSA's repeated failure to hold municipalities to account. The outcome was that most of the issues EDI restructuring aimed to correct did not materialise, *inter alia*, harmonised tariffs, consolidation of the industry, cost reflective tariffs, maintenance of the system. However, in the view of McDonald (2009, p.50), the biggest failure was to perpetuate and entrench the apartheid practise of a pricing scheme that subsidises industry and middle class, while charging low income households higher absolute tariffs. Resulting in reduced consumption or the use of alternate, often more dangerous, forms of energy.

Terminating REDs of course did not change anything, and all industry participants continue to recognise the urgent need for reform. SALGA has made public pronouncements and issued position papers on restructuring of the EDI (A Eberhard 2013; PDG 2013), but progress remains slow.

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<sup>115</sup> A formal announcement was made two months later (December 2010), that cabinet had taken the decision to terminate EDI restructuring

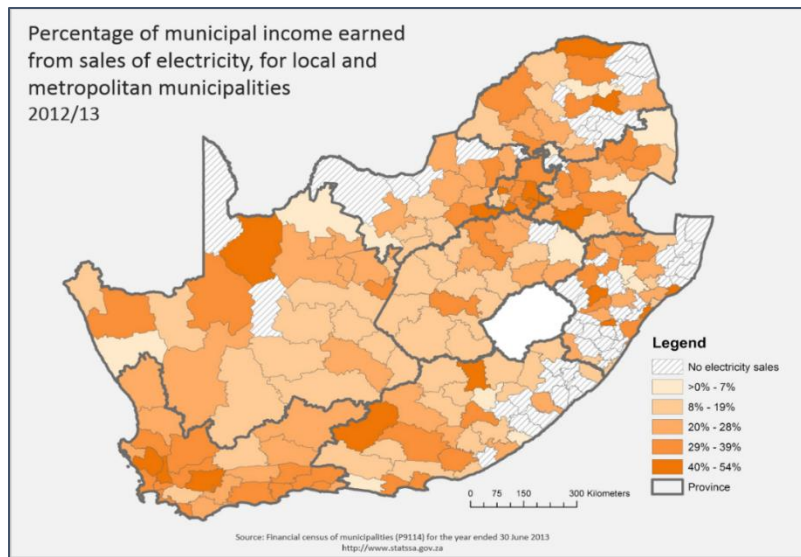
### 7.5.6 Non-Payment of Municipal Services and Funding Shortfalls

The phenomenon of non-payment of municipal services has a long history, dating back to the 1980s; having successfully been used as an effective protest tool against an illegitimate minority government (Chapter 4.4). This practise continued after the 1994 elections however, and by all accounts has become endemic and of serious concern. Ascertaining the reasons for continued non-payment has thus spurred significant research from all sectors - government, NGO's and academia (see McDonald 2002; Mavhungu 2011; Peters 2012; Fjeldstad 2004; Ringane 2013; Treasury 2001; National Treasury 2011). The reasons are of course a combination of factors and are not limited to just one explanation, as often touted by various sectors who selectively focus on singular signals to support their perspectives and arguments. Reasons for non-payment include: unwillingness to pay, ability to pay, entitlement, inability of municipalities to collect (no metering system, broken meters, no billing system), unhappiness with service or associated services delivered, an ingrained culture of non-payment ("others do not pay, so I won't"), as well as a lack of trust in local government to use the funds received effectively - together with non-payment remaining an indirect form of protest against national government, as the electorate is unable or unwilling to vote for any other political party – voicing dissent through non-participation.

Regardless of the reasons, the effect of non-payment for services on municipal finances is devastating and greatly impedes municipalities' ability to deliver on their constitutional mandate of developmental local government. For the period 1994-2003 municipalities accumulated a total of R24.3 billion of consumer debt due to non-payment (Fjeldstad 2004); growing to R108 billion in 2016; 66% of which was owed by households (National Treasury 2016b). In a presentation to Parliament in August 2016, the CEO of Eskom reported that municipalities owed the utility R6 billion, which excluded R1.4 billion written off in 2004, and stressed the need to recover these funds. In early 2016, and again in 2017, Eskom went as far threatening to disconnect the top 20 defaulting municipalities, who in early 2016 owed R3.68 billion (Whittles n.d.) The threat yielded some results, as 60 municipalities entered into repayment agreements, including 19 of the top 20. In 2015, the acting CEO of Eskom suggested that the utility bypass municipalities and supply all customers directly with electricity, to improve Eskom's financial situation. The consequences of such an action were analysed by StatisticsSA, (Figure 7-13) who found that 30% of municipal income was derived from electricity sales (2013) and that the *"the financial viability of many municipalities could be tenuous if they were no longer able to trade economic services, such as electricity"*. Another ploy put forward by Eskom was the introduction of pre-paid meters, which it believed should be made mandatory for the entire residential sector (PMG 2016a)<sup>116</sup>. Indeed, the amount owed to Eskom by Soweto, which it supplies directly and is not included in the municipal debt, was R4.74 billion for the year ended 2016 (Eskom 2016, p.41).

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<sup>116</sup> As of 2017, Eskom will only supply households on a pre-paid basis



Source: StatsSa (2016)

Figure 7-13: Percentage of Overall Municipal Income Earned from Sales of Electricity (2013)

Ultimately, municipal funding shortfalls must be covered in some way. The most expedient is to divert funds, such as bulk purchase payments to Eskom (PMG 2016a); but this practise only buys time and eventually the shortfall must be sourced. Municipalities thus turn to the two sources available to them. The first is to increase property taxes and service tariffs on the existing resident base. This is problematic though, as it penalises compliant residents who will thus resent it. In all likelihood, the added financial pressure on residents may lead to a greater percentage of non-payment. The second source is national government transfers. This however immediately goes against the core principles of decentralisation. Decentralised government, the constitution acknowledge, could only be achieved if local governments were largely financially self-sufficient, which is why the specific revenue generating functions they perform and their “equitable” share of nationally collected revenue (skewed towards rural municipalities) are both protected by the constitution. Of course, local government has always relied on national government to fund deficits, to some extent. This was easier under apartheid when municipalities only had to concern themselves with the white population and could effectively ignore black townships. Since 1994 however, annual grants from national government, which strain national revenues and generally come with conditions that affect / impede envisaged local government independence, have been growing steadily. In its 2003/4 Local Government Fact Book for example, the Department of Provincial and Local Government (DPLG) states that “*financial viability is one of the key constitutional challenges facing local government*”. At the time, the DPLG calculated that metropolitan municipalities generated 97.8% of total income to fund operating expenditure from own sources, while local governments were at 89% and district municipalities at 76.4%. District municipalities received almost all of their revenue from the now defunct RSC levy (DPLG 2004, p.44). Soon thereafter, spawned from a 2003 policy shift, NT announced a 3-year average annual 18.4% increase in funding made available to local government, for the provision of free basic services, the extension of services and to improve service delivery. National government contributions to local government for the period 2003 to 2016 (Figure 5-2), seen as a percentage of total national revenue (including budget deficits), almost tripled from 3.6% to 9.1% and has gone from R26 billion to over R100 billion per annum, in real terms. It must be noted though, that the large percentage

increase from 2006 to 2007 was to compensate municipalities for the revenues lost from the removal of the RSC levy (Treasury 2016b; National Treasury 2011; Treasury n.d.; Treasury 2016a; Treasury 2003).

By 2015, government grants were the largest contributor to municipal revenue, (31%); followed by electricity sales (28.3%) and property rates (14.7%) (StatsSA 2016).

## 7.6 Case Study: Johannesburg Electricity Undertaking (JEU)

### 7.6.1 Aligning to a New Political Structure and Extended Service Area (1995 – 2001)

In 1994 Johannesburg comprised of thirteen separate municipalities, divided along racial and within this, ethnic or cultural lines<sup>117</sup>, with differing capacities and in many instances overlapping functions and powers. After the 1995 local government elections, a two-tier system was introduced, where the municipalities were merged into four independent geographical sub-structures called Metropolitan Local Councils (MLCs) councils, overseen by the Greater Johannesburg Metro Council (GJMC). The consolidation proved more difficult than expected. Although each MLC and the GJMC had its own tax base and budget, it was treated as one. The incorporation of previously unserved black townships, inhabited by almost entirely by low income households, could only be serviced by redirecting cross-subsidisation. The two white and affluent suburbs of Sandton and Randburg (Chapter 7.4.1), having been absorbed into the GJMC, were henceforth levied the same property tax rates as the other (white) suburbs. The introduction of the revised, and higher, property tax resulted in a three-fold increase for previously under taxed Sandton households, who responded with a rates boycott, knowing that the city could not use its most effective creditor collection tool, cutting off users' electricity supply until outstanding arrears had been settled, as they were supplied by Eskom. Sandton residents opened a separate account into which 80% of residents paid their old taxes, plus 20%. The boycott lost steam after two years but cost the city over R200 million in unpaid and unrecovered revenues. Payments during this period dropped throughout the city (Table 7-11), and dropped as low as 81% in 1997. The city's 1998 financial statements reported that outstanding debt had increased to R2.9 billion, of which it was felt only R1.3 billion was recoverable. Reduced revenues did not deter the ANC led municipality from continuing to focus on delivery. Budgets were expenditure driven, with little thought as to how they would be funded<sup>118</sup> - all coming together to create a perfect storm (Lodge 2003; Barchiesi 2011; Amen & Bosman 2006; Kulkarni 2012; Johannesburg 1995). The newly elected councillors and politicians who held senior positions were new to a job which was complex, demanding and the task at hand considerably underestimated. As Schuster (1995) put it:

*"...by the inexperienced, third rate politicians representing the ANC at the local level. The problem is one that plagues the entire country, because most of the ANC's seasoned leaders have gone to work in the upper echelons of government. ...nowhere (are the deficiencies) better illustrated than in the tortuous gestation of the Greater Johannesburg Metropolitan Council."*

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<sup>117</sup> The white population of South Africa were primarily descendants of British or Dutch nationals, who following the Anglo Boer Wars were distrustful of each other. However, the country attracted many migrants from Europe (Portuguese, Greek, Italian, Jewish and others) who tended to stick together

<sup>118</sup> In 1996 Martin Pomeroy took early retirement citing continual political interference. Budget allocated for capital expenditure or other previously agreed allocations, would be taken on short notice to pay for other municipal activities resulting in an under maintained network and low employee morale. Interview January 27, 2017.

Fourteen major issues were identified by the Attorney General in the 1997 and 1998 financial statements, at the height of the crisis, when Johannesburg was technically bankrupt. Observations made in the 1998 report on electricity, and a few other issues are detailed below to demonstrate just how endemic and dire the situation had become:

- **Electricity:** Although regular reconciliations of electricity purchases and sales were being performed, the councils did not provide explanations for the variances. Factors such as readings based on assumed or estimated consumption and numerous unread meters, resulted in the losses of the councils being unquantifiable. It was noted that distribution losses could not be accurately calculated per council due to the electricity metering network boundaries not matching council boundaries.
- **Vacancies Financial:** Most functions were found to be understaffed. This placed additional pressure on experienced staff members, who were expected to work beyond reasonable expectations. Thus, many senior / experienced employees resigned, these positions were either not filled or filled by people placed in acting positions. The situation resulted in a lack of segregation of duties, which became a pervasive practise throughout all councils.
- **Staff Training:** The high incidence of skilled staff resignations leading to added work pressure on remaining officials meant that new hires were not adequately trained. There were also insufficient training programmes.
- **Lack of Accountability:** Pervasive across the municipality and exasperated by staff shortages and limited skills.
- **General IT Controls:** Generally poor controls (lack of security, passwords shared, lack of skills to maintain systems, limited change management controls etc.). Little action had been taken to address the issues identified and raised during the previous year's audit.
- **Collapse of Housing Debtors Scheme:** Since the system collapsed the previous year, it remained non-operational.

Table 7-11: Payment Levels of Administrative Areas within Johannesburg (1996 -1998)

Administrative Area	1996	1997	1998
	%		
Orange Farm		6	3
West Soweto		14	23
Alexandra		21	13
Dobsonville		25	44
Soweto		27	33
Ennerdale	75	34	71
Lenasia	64	55	91
Johannesburg East	90	85	89
Sandton	97	87	91
Johannesburg South & North		90	93
Randburg	100	94	90
Roodepoort		98	103 <sup>119</sup>

*Source: Municipal Archives.*

In mid-1997 the GJMC was not able to pay a R300 million bulk electricity bill from Eskom (Matebese 2013, p.11). National government finally intervened in 1998 when 10, and then 15, councillors were given

<sup>119</sup> This figure is not erroneous and represents an over recovery



control of the city. Known as the C15, they had executive authority to design and implement municipal service policies, including the outsourcing or corporatization of municipal functions. A city manager position was created in 1999 to hasten the transition. Khetso Gordhan, a respected activist, was appointed and he developed a three-year turnaround strategy which came to be known as iGoli2002. City gas and Rand Airport were sold and most of the utilities were corporatized (ring fenced), requiring them to operate as private sector companies but still wholly owned by the CoJ. From this process, City Power (electricity), Johannesburg Water and Pik-it-Up (refuse) and the Johannesburg Roads Agency were created from 2000. The plan also included massive budget cuts, dropping from R1.7 billion in 1995 to R500 million in 1999 and unsurprisingly resulting in a deterioration in services and maintenance, and an exodus of skilled staff (Lodge 2003; Barchiesi 2011; Johannesburg 1995).

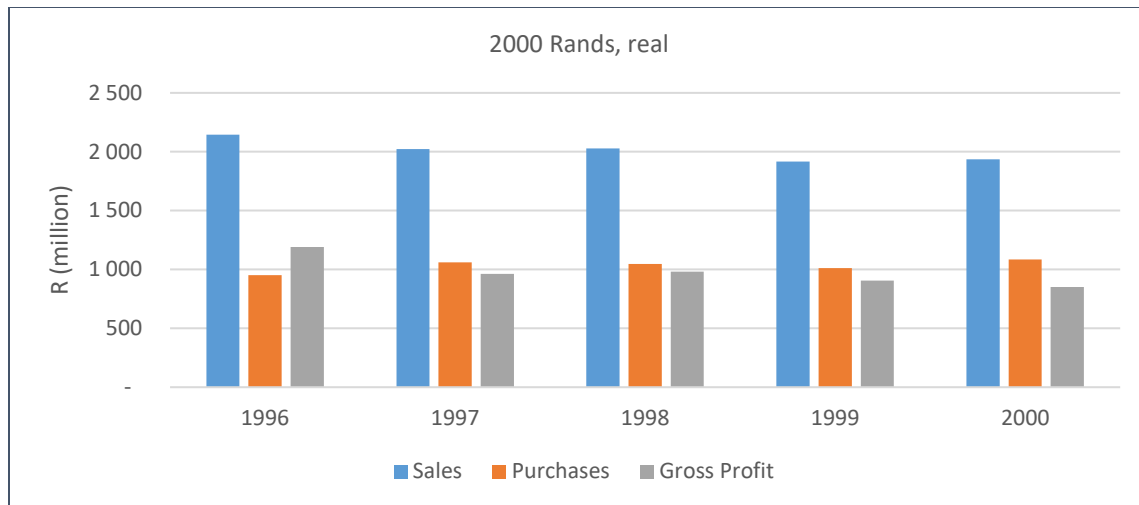
The crisis also had an impact on reporting. In 1995<sup>120</sup>, the year Mr Pomeroy resigned, the JEU department published its last Annual Report of the General Manager – Electricity Department, a report which dated back to 1917. The municipality published consolidated annual financial statements for the period 1995 – 2000, which were contentious as each MLC wanted their own set. The reports focused heavily on the poor state of affairs, but were scant and provided little detail about the performance of the electricity business, other than warnings about inaccuracies due to operational shortcomings – broken meters, no meter readings, inaccurate billing etc. Figures for electricity, as with all other services, were rolled up and reported as total sales and total purchases. Operational expenditure was also reported as a total. More detailed figures for electricity, only became available once again from 2002, a year after City Power was formed and had operated for a full financial year, and gradually improved over time. The issues are illustrated with some select extractions from the 1995 – 2000 Consolidated Financial Statements (Table 7-12). Although declining, the sale of electricity continued to provide a reliable revenue stream for the municipality - Figure 7-14.

Table 7-12: Extracts from City of Johannesburg Consolidated Financial Statements (1996 – 2000)

Year	Comment / Statement
1996	65% of electricity meters in Ennerdale are non-operational.
1998	Electricity and Water: An electricity billing audit has been initiated and has identified that substantial amounts are not being billed. These have been attended to and are receiving ongoing attention. Electricity losses have increased from 6.2% (1997) to 8.2% (1998), which equates to R163 million of unbilled revenue.
1999	The credit control system was enhanced in 1998, leading to 216 294 service cuts and the finance department is in the process of retrieving R356 million over a 15 month period. Collections have been outsourced on a commission basis. Payment levels increased accordingly, from 90% to 92% for the year under review.
2000	Due to inadequate control measures, the Auditor General was unable to verify the accuracy and completeness of revenue from electricity and water billing

**Source:** Johannesburg Municipality 2000 (1995-2000)

<sup>120</sup> Confirmed by S Bridgens – 5 September, 2016



**Source:** Johannesburg Municipality 2000 (1995-2000)

Figure 7-14: City of Johannesburg – Electricity Sales and Purchases (1995 – 2000)

### 7.6.2 Corporatization – The Establishment of City Power (2001 – 2017)

The JEU was corporatized in 2001 under the name City Power (SOC – State Owned Company). It was 100% owned by the CoJ and established in terms of the Companies Act. Governance, regulatory and service agreements exist between the two to ensure performance. City Power's (CP) mandate from its (only) shareholder is to buy and sell electricity to the citizens of Johannesburg. In 2014, its two primary suppliers were Eskom (80%) and Kelvin Power station (20%), which was privatised in 2001.

#### Surpluses Generated from Electricity

CP's first year of operations recorded a R385 million (R181 m 2015 real) loss, but this was less than 5% of the total R3.9 billion (R8.4 bn) loss recorded by the Johannesburg Metro. Operations stabilised and CP recorded a surplus in 2003, and has continued to do so ever since, except for 2008 when it was still profitable but high finance costs resulted in it posting a deficit. Trading surpluses from CP were the primary reason the Metro was able to achieve financial stability and operate profitably, especially from 2009 (Figure 7-15).

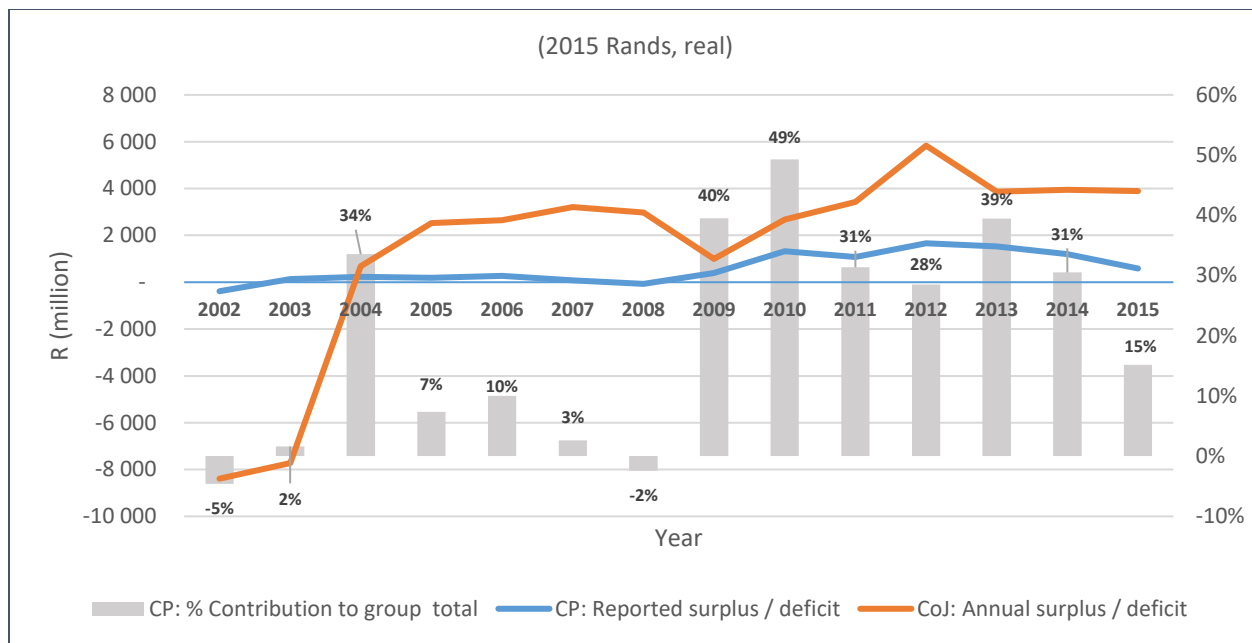


Figure 7-15: Electricity Surplus Contribution to Total Municipal Surplus for Johannesburg (2002 – 2015)

This feat is more remarkable, if bulk purchases and electricity revenue (Figure 7-16), and revenue from delivered electricity (Figure 7-17) are analysed. Figure 7-16 illustrates that the differential between bulk purchases and sales is relatively constant from 2002 until 2008, when the spread increases until 2012 and then stabilises again. Figure 7-17 shows that delivered electricity is flat from 2007 and declines markedly from 2010, however, this is not the case for bulk purchases which remain constant and only start to decline from 2013 - implying that CP kept buying the same number of units but reselling fewer every year i.e.: there were losses in the system, but surpluses remained stable from 2009 to 2012.

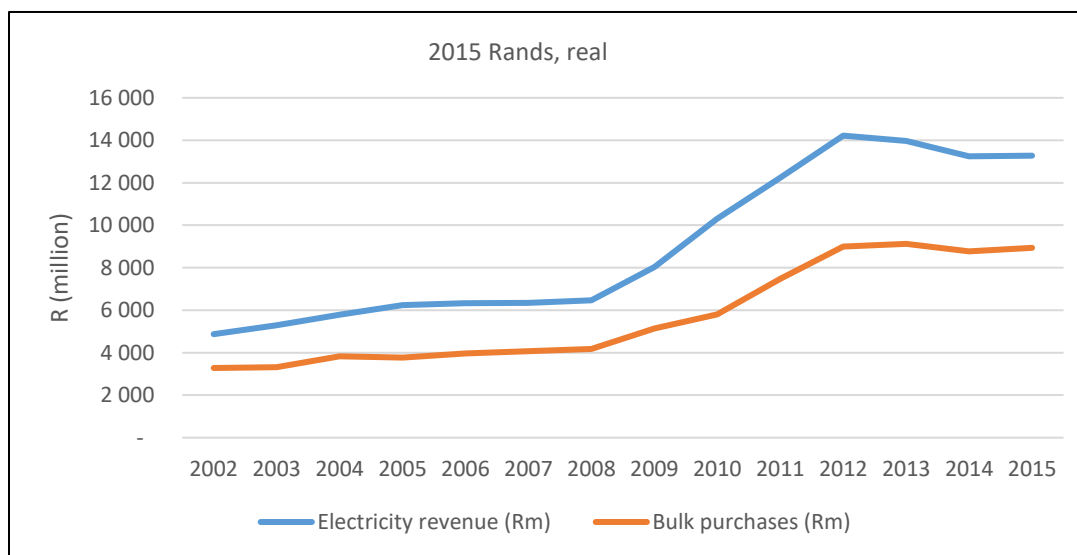


Figure 7-16: City Power Bulk Purchases and Electricity Revenue (2002 – 2015)

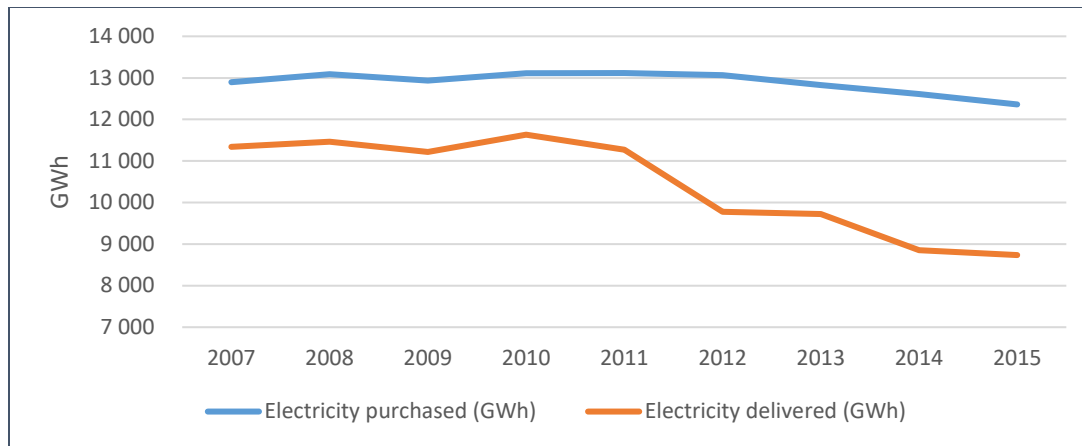
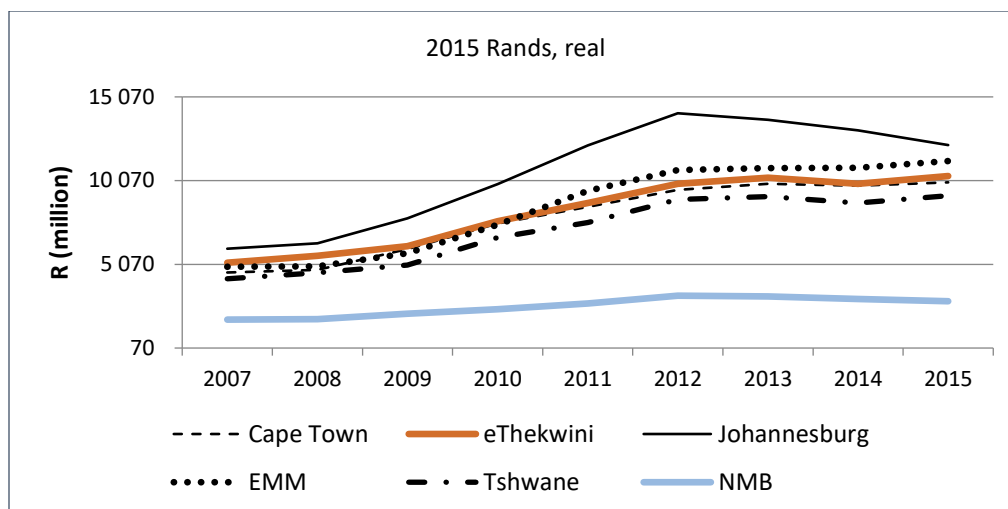


Figure 7-17: Electricity Purchased versus Delivered, Johannesburg (2007 – 2015)

The above demonstrates the extent to which Johannesburg was able to initially capitalise from the electricity crisis. Several reasons could have accounted for this. The first was that it was because the disproportionately high electricity tariffs rose from a very low base (until 2007 South Africa had amongst the lowest electricity tariffs in the world) - meaning a considerable lag effect before consumers were affected sufficiently to respond through behaviour and / or technology change. The second was that South Africa was initially able to weather the 2008 global financial crisis relatively well, a combination of low external debt, sound fiscal and monetary policies, the resilience of the banking system, and of course, economic activity generated from its hosting of the 2010 World Cup, allowed it to avoid outright recession (Baxter 2009; OECD 2010). However, things did not improve from 2010 and the country entered a long period of low economic growth, punctuated by recession, and a stubbornly high unemployment rate, where it continues to languish in 2017 – *“Growth has disappointed in the last few years. Weak consumer demand, persistently falling business investment and policy uncertainty.....bold structural reforms, supported by social partners, are needed to unlock the economy”* (OECD 2015). A third reason was that by levying a tariff increase commensurate to that of Eskom, CP created a greater return as it gained the additional benefit from the difference between Eskom’s bulk supply rate and its retail rate. The CP tariff increases were similar, and often greater, than Eskom tariff increases. (Year: Eskom, CP) 2008: 27.50%, 22%; 2009: 34.1%, 31%; 2010: 24.80%, 29%; 2011: 25.80%, 31% and so on. Thus, Eskom tariff increases were by no means a straight pass through to the CP consumer, or any other consumer supplied by an MEU. - Figure 7-18 shows how all six metros benefited from increased revenue from 2008 to 2012, because of the tariff increases, resulting in higher surpluses, as was the case for Johannesburg (Figure 7-15).



Source: Eberhard, R (2016)

Figure 7-18: Revenue from Electricity Sales for six Metros (2007 – 2015)

These short-term gains were always going to come at a price and many within CP knew it, but were largely powerless to do anything about it.

*“City Power Johannesburg (Pty) Ltd does not set its own tariffs. In developing the proposed tariff increase, the company has to adhere to the COJ tariff development methodology. The outcome of this methodology is a proposed tariff escalation rate. This rate is transacted into the company’s financial models and then submitted to the Board Pricing and Regulatory Committee for consideration.”*  
City Power Annual Business Plan (2006 – 2011)

Thus, it is the CoJ, and not CP, who decide on the annual surplus to be generated from electricity sales. Taking this one step further, the CoJ develops the following year’s budget knowing that shortfalls can be covered from electricity, and to a lesser extent, other trading surpluses. In other words, the electricity tariff increases are derived primarily on municipal funding requirements and not economic principles or regulatory requirements<sup>121</sup>. Eskom sharp tariff increases from 2007 affected all electricity consumers and ultimately, and understandably, led to consumer resistance and reduced demand. Indeed, this was predicted from 2009 (see Inglesi & Pouris 2010; Inglesi-Lotz 2014; Inglesi-Lotz 2011; Inglesi-Lotz & Pouris 2012), whose research forecast that the magnitude and frequency of the tariff increases, would first result in decreased consumption, and then lead to long-term stagnation of electricity demand – until at least 2025. On release, these predictions were dismissed as overly dramatic and alarmist, with Eskom and national government of the view that were it not for the electricity supply shortages, the economy would be growing. – And that once resolved, constrained demand (deemed certain and cumulative), would unlock economic growth and even boost it, as delayed projects became viable<sup>122</sup>. This, unsurprisingly, did not happen but what did become clear was that the Inglesi-Lotz and Pouris predictions were accurate – certainly in the residential sector. In 2013, Eskom commissioned a study to determine the effects of tariffs

<sup>121</sup> Practice confirmed with one of the CP interviewees, who stated that 2015/16 was the first year that the CP tariff adhered to the NERSA prescribed methodology, which derives the tariff from a weighted average of: 70% Eskom tariff increase and 30% CPI

<sup>122</sup> The author attended several workshops and held discussions with numerous Eskom and national government (2008-2013) who stated these views publicly

on national household electricity consumption (Jordaan & Dekenah 2013) - Table 7-13, and the authors found that although all electricity users reduced their usage, they were affected differently. The bottom decile, because they use such a small amount that it cannot be reduced further; and the top 4% (the last decile was broken down further) were the only groups who reduced their consumption by less than 20%. The remaining 86% of the electricity consumers shifted to a more elastic state. This can be seen in CP's declining trend in total demand from 2008/09 (Table 7-14), which CP attributes "*slow economic recovery, energy efficiency improvement, technology conversion to exploit alternative energy sources, reduced consumption base, and a variety of other factors*", which it expects to persist until 2019.

The Financial and Fiscal Commission's 2016 Technical Report dedicated an entire chapter on the subject, titled "*The Impact of Electricity Price Increases on Municipalities*". Peters (2016) used econometric modelling to quantify the impact that the sharp increases in electricity prices have had on municipal expenditure and revenues. The higher cost of bulk electricity purchases was found to have had a "*statistically significant and negative impact on municipal revenue in all categories of municipalities, particularly metros and large towns.*"

Table 7-13: Direct Nominal Price Elasticity between 2006 and 2011

Household deciles	Average 2005 kWh usage per month	Average 2011 kWh usage per month	% distribution of 2011 kWh usage per hh decile	Average monthly in-kind consumption 2005/06	Average monthly in-kind consumption 2010/11	% change in Kwh usage	Nominal price elasticity
1	138.60	113.08	4.4%	R995.8	R1 850.2	-18.4%	-0.150
2	173.97	121.48	4.8%	R1 263.7	R2 144.7	-30.2%	-0.246
3	204.82	136.65	5.4%	R1 495.2	R2 668.9	-33.3%	-0.271
4	213.68	144.92	5.7%	R1 802.2	R3 144.0	-32.2%	-0.262
5	249.50	156.58	6.1%	R1 976.8	R3 618.8	-37.2%	-0.303
6	284.20	189.33	7.4%	R2 488.8	R4 504.1	-33.4%	-0.272
7	341.00	221.83	8.7%	R3 063.5	R5 792.8	-34.9%	-0.285
8	468.08	288.50	11.3%	R4 448.3	R8 586.7	-38.4%	-0.312
9	634.98	414.83	16.2%	R7 734.7	R14 189.4	-34.7%	-0.282
10	1 092.25	765.75	30.0%	R17 649.9	R29 474.3	-29.9%	-0.243
10.1	767.58	579.58	4.5%	R8 582.2	R16 266.0	-24.5%	-0.199
10.2	747.00	577.17	4.5%	R9 882.4	R18 337.2	-22.7%	-0.185
10.3	883.08	693.24	5.4%	R11 226.0	R22 838.1	-21.5%	-0.175
10.4	906.73	827.42	6.5%	R11 604.2	R28 693.3	-8.7%	-0.071
10.5	1 167.95	1 152.25	9.0%	R17 378.7	R40 218.3	-1.3%	-0.011

kWh are estimated using an average price per kWh

**Source:** Jordaan & Dekenah (2013)

Table 7-14: City Power Total Demand 2006 to 2017 (GWh/annum)

Financial Year End	Demand (GWh/a)	Volume Growth
2005/06	12 147	3.6%
2006/07	12 900	6.2%
2007/08	13 091	1.5%
2008/09	12 938	-1.2%
2009/10	13 115	1.4%
2010/11	13 116	0.0%
2011/12	13 066	-0.4%
2012/13	12 826	-1.8%
2013/14	12 608	-1.7%
2014/15	12 361	-2.0%
2015/16	12 011	-2.8%
2016/17	11 755	-2.1%

*Source:* (Power 2016)

Additionally, the CP funding model is controlled almost exclusively by the CoJ. Annually, CP submits its budget requirement to the CoJ, which the CoJ considers before allocating a final amount. A consequence of this approach is that the CoJ is always more likely to defer CP capital investment for repairs and maintenance (see Table 7-15) to fund its own priority projects and thus exasperating the under-investment in municipal EDI infrastructure, as detailed in Chapter 7.5.4 ADAM. Finally, CP has no direct financial control of its business consumers pay their accounts directly to the CoJ.

This highly centralised approach means that CP management has limited authority and control over its business, creating major operational risk for the MEU, as CoJ bureaucrats and politicians are less likely to have the necessary expertise, understanding or share the urgency to resolve CP critical issues. The points highlighted in bold from the SWOT analysis in the 2016 - 2021 annual business plan (Figure 7-19) illustrate the consequences of the centralised operating model. For example, supporting CoJ cluster programmes (Threats) takes priority over refurbishing and extending the network; while, outages and the slow restoration following outages (Weaknesses), is clearly not good for business. The SWOT analysis reflects a utility which is unable, perhaps incapable, of taking the necessary corrective actions to correct weaknesses, convert opportunities and mitigate risks.

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• ISO accreditation</li> <li>• Good knowledge and understanding of the business</li> <li>• Well documented value chains</li> <li>• Supportive stakeholder and board</li> <li>• Position in top management team filled</li> <li>• Strategic risks identified and documented</li> <li>• Updated risk management process in place</li> <li>• Pockets of strong subject matter expertise</li> </ul>	<ul style="list-style-type: none"> <li>• Communication (internal and external)</li> <li>• Change management</li> <li>• Contracts management</li> <li>• Perceived low employee morale</li> <li>• Ineffective performance management</li> <li>• Poor implementation of documented processes</li> <li>• High vacancy rates</li> <li>• Inability to execute projects and follow through on benefit realisation</li> <li>• Process leading up to decision making is slow</li> <li>• <b>Revenue collection</b></li> <li>• <b>Reducing the average age of T&amp;D network where it is in excess of 40 years through refurbishment and replacement</b></li> <li>• <b>Obsolete and unreliable equipment where no spares are available</b></li> <li>• <b>Improving network safety (replacement of high risk equipment)</b></li> <li>• <b>A network that, due to densification, has in many areas exceeded its firm capacity and in some instances reached its installed capacity</b></li> <li>• <b>Outages and slow restoration times following outages</b></li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Expansion of supply</li> <li>• Security of supply</li> <li>• Alternative energy sources</li> <li>• Community involvement/engagement (Jozi@work)</li> <li>• Smart grid realisation</li> <li>• Company image/reputation</li> <li>• Public private partnerships</li> <li>• Off grid solutions</li> <li>• Investment in energy management systems</li> <li>• <b>ToU tariffs to recover peak demand liabilities</b></li> <li>• <b>Smart meters and tariffs to reduce load to address present generation constraints</b></li> <li>• Household conversion to gas cooking and heating</li> </ul>	<ul style="list-style-type: none"> <li>• Load shedding</li> <li>• <b>Theft/vandalism, illegal connections leading to loss of revenue and damage to infrastructure</b></li> <li>• <b>High debt levels leading to non-payment or reduced consumption</b></li> <li>• <b>Dramatic increase in the cost of labour and materials</b></li> <li>• <b>Comply with the cluster programmes while trying refurbish and extend our network</b></li> <li>• Industrial action</li> <li>• High levels of coal usage leading to increased GHG despite pressures to reduce</li> <li>• <b>Energy efficiency and embedded generation</b></li> </ul>

Source: Power (2016)

Figure 7-19: City Power 2016 SWOT Analysis

### City Power and the National Regulator (NERSA)

In 2014, NERSA issued benchmarks to help guide distributors. Table 7-15 compares these benchmarks against CP's 2013 to 2015 figures from their annual financial statements. *Note:* 2011 was the last year that CP published a debt collection percentage (91%).

Table 7-15: City Power Performance compared against NERSA Guidelines (Real, 2015)

Guideline	Range & (Mean)	2013	2014	2015
Bulk purchase energy costs as percentage of total costs	58% – 78% (75%)	70%	73%	69%
Surplus as a percentage of electricity sales	10% - 20% (15%)	11%	9%	4%
Total system losses	5% -12% (10%)	30%	30%	30%
Average sales price ratio to average purchase price	Set at 1.58	2.24	2.25	2.10
Spending on repairs and maintenance as a percentage of sales revenue	Set at 6%	3.3%	4.4%	4.1%
Debt collection rate	95%	N/P	N/P	N/P

Source: Author (own calculations)



## The Relationship Between Tariffs and Electricity Losses

Higher tariffs led to reduced consumption and increased non-technical losses<sup>123</sup>, and this can be attributed to two factors: The first, is the ability to pay: An everpresent reality in a society with such high levels of inequality, made worse during weaker economic conditions and a 300% increase in electricity tariffs over a five year period (2007 -2012), leading to late payment, bad debt and / or theft. The second, was an already inefficient and error prone administrative department immobilised when the transition to a new computer system in 2010 was mismanaged. The now notorious Johannesburg billing crisis led to the formation of the Joburg Advocacy Group<sup>124</sup>. However, the billing problem is not limited to a sub-par ICT system, the problem is far greater and across the board<sup>125</sup>. Poorly skilled and / or tardy and / or corrupt administrative staff who capture incorrect information; field workers, who for the same reasons, read meters inaccurately or estimate readings; new connections that are not registered on the system, erroneously or for illegal gain, resulting in the provision of free electricity - especially prevalent in large residential estates or office parks where there is a lot of sub-metering, and although not quantified could account for as much as 4-6% of the energy dispatched. A contributory factor is the difficult relationship that exists between CP and the CoJ, largely the result of the operational framework described above, and made worse by over fifteen years of operating from a separate location which has led to weak institutional linkages, impersonal relationships and ineffective communication.

The practise of cross-subsidisation is entrenched to such an extent that it has become standard operating procedure. A researcher from Stellenbosch University's sustainable energy studies centre, was asked to ascertain the viability of installing photovoltaic panels on municipal buildings<sup>126</sup> to offset electricity usage. Having identified several suitable buildings, the research ended when reliable and up-to-date electricity bills could not be produced and installed electricity meters, if operational, could not be relied upon. Quite simply, the researcher concluded that the Johannesburg Property Company did not receive electricity bills from CP, and if it did, did little about them. The research was terminated, because without electricity bills no business case could be developed. It is therefore highly probable that it is standard practise for all CoJ municipal entities to pay little, or even nothing, for electricity<sup>127</sup>. To fund these internal non-technical losses and deliver the surplus needed by the municipality to cross-subsidise municipal functions, mark-ups are increased. In 2010 municipal electricity mark-ups averaged 57.5% and 50.2% in 2011 (Jordaan & Dekenah 2013, p.7). The authors cautioned that this practise presents a cash flow risk, as users respond by shifting to a more elastic state by switching to alternate energy and / or take additional measures to reduce consumption. This is exactly what has happened at CP, energy delivered dropped to 8 736 GWh in 2015 from 11 723 GWh in 2011, while losses increased materially (Figure 7-20). The CP 2012 annual business plan estimated the cost of non-technical losses to be R3.8 billion, by any account a massive amount. Under the heading *Key Revenue Related Challenges*, it states:

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<sup>123</sup> Non-technical losses are made up of administrative issues (estimates, unread meters, incorrect billing) and non-administrative (illegal connections, theft and meter tampering)

<sup>124</sup> <http://www.joburgadvocacy.org/>

<sup>125</sup> Interviews held with employees and consultants to CP

<sup>126</sup> Municipal property is managed by the Johannesburg Property Company. As with CP, JPC was established 2000 as a private company wholly owned by CoJ

<sup>127</sup> This practise is true for all municipalities

*The R3.8bn losses indicated below are made up of R1.9bn administrative losses and R1.9bn of non-technical losses”* The causes listed are unbilled customers, tampering, illegal connections, incorrect billing and estimates  
Power (2012, p.33)

If one considers that the non-technical losses “challenge” was more than double the increase in turnover (R1.6 billion) - which in monetary value was greater than 30% of turnover (R12.6 billion); and, in energy terms, represented 24% GWh delivered - then it is nothing less than an unmitigated disaster and a major business risk. The question that naturally arises is how it came to this?

In seeking an explanation, we start with technical losses first. Discussions with industry professionals, corroborate Nersa guidelines, who have set 6 – 7% as the benchmark for distribution losses. CP reported technical losses of 6% until 2002, the following year the figure was increased to 9%, where it has remained. The basis for this was an internal report which identified a few remote outlying areas within the network with losses of 9%, this higher figures was used to reflect the state of the entire network, allowing for the re-categorisation of up to 3% of non-technical losses. Indeed the 2012 annual plan suggests as much: “(Technical losses) ...been assumed to be 9%. Tests are currently underway to validate this figure, and initial results indicate that this figure may be 7%” (Power 2012, p.36). These test results were never made public or referred to again and the losses have remained at 9% in the subsequent plans (2013 – 2017).

With regards to non-technical losses, these were generally within the Nersa guidelines of up to 5% for the period 2005 to 2011, but exploded from 2012 - Figure 7-20. Three reasons account for the underlying causes leading to theft and administrative errors: The new billing system, the delayed effect of the tariff increases, and the decline in the economy. What is abundantly clear from the annual business plan during this period is that although recognised as a high priority item, with loosely described action items to address the losses, such as:

*Non-technical losses continue to be a challenge, due to increased theft and vandalism* (Annual Business Plan 2014, page 70)

*Meter readers must face penalties for poor data capturing* (Annual Business Plan 2015, page 51)

*Electricity losses, technical and non-technical, are too high at 30% and this requires urgent attention* (Annual Business Plan 2016, page 79)

Many more statements could be cited, but the point is that having identified and interrogated the causes of non-technical losses in some detail, two things remain constant: their high levels persist, as does the strong commitment to reduce them. In short, little progress is being made.

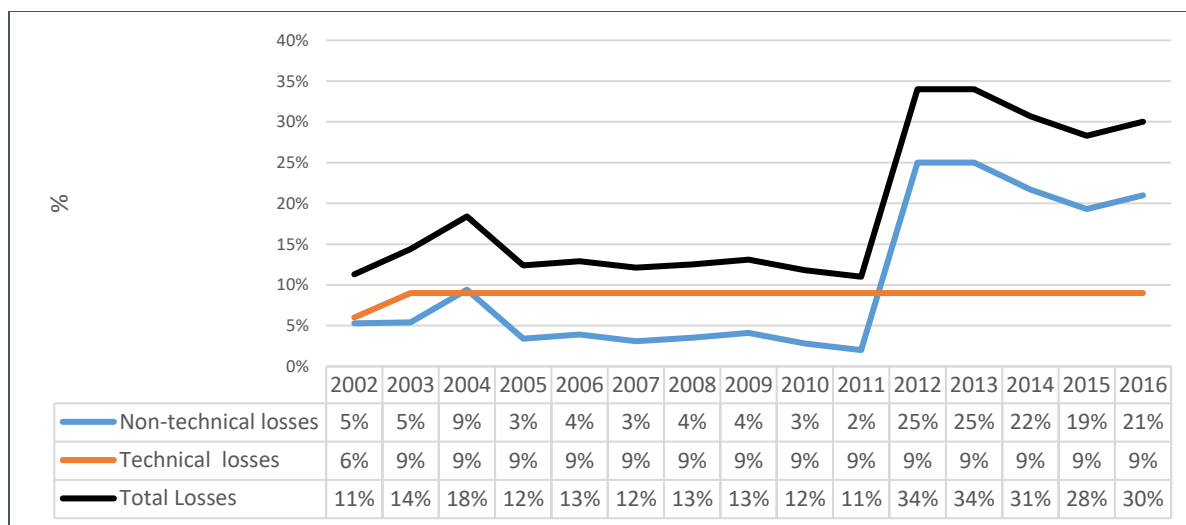


Figure 7-20: Total Electricity Losses at City Power (2002 – 2016)

The 2015 Annual Business Plan (page 50), states that non-technical losses may be considered to be revenue losses. Which indeed they are. But to what extent? Figure 7-21 illustrates two things. The first, represented by the line graphs, is the consequence (delayed) of high annual tariff increases on non-technical losses, as technical losses have remained at 9%. Tariff increases of 22% (2007), 31% (2008), 29% (2009) and 30% (2010) were followed by a more than ten fold increase in losses (2% to 25% in 2011 - Figure 7-20). It is true of course, that losses cannot be attributed solely to high tariffs and the stabilisation and slight improvement from 2013 is more than likely due to the improvement in meter reading and the billing system. The second, shown by the bars, is the consequence that reduced consumption and high losses has had on surpluses. Using the NERSA guideline of 10% (mean) for total system losses as the cap, the value of lost revenue in excess of 10% is quantified. At 2015 real prices, system losses over 10% for the ten year period 2006 to 2015 amounted to over R8.4 billion.

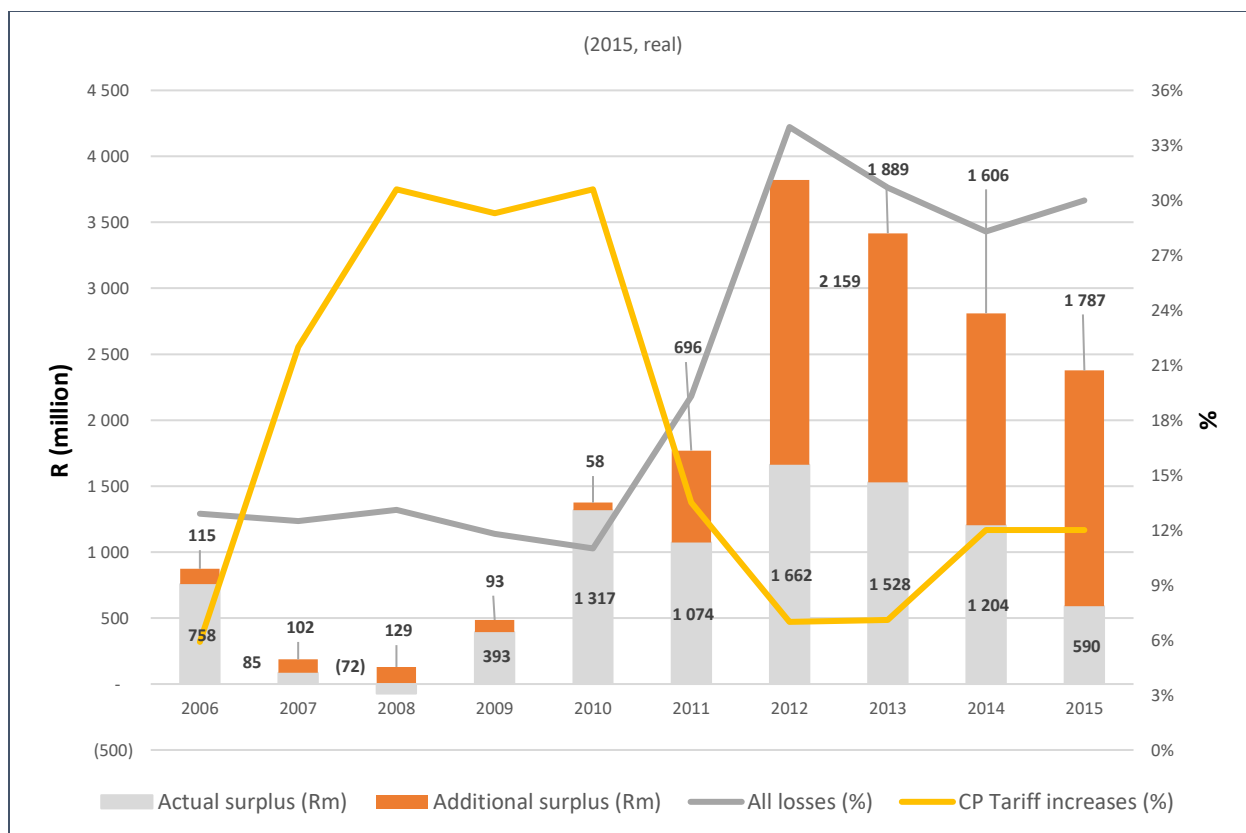


Figure 7-21: Revised Electricity Surplus for Johannesburg if Losses Capped at 10% (2006 – 2015)

### Business Model Conflicts faced by City Power Management

Competing priorities are a reality for every business and perhaps more so for government, which has the dynamics of servicing and satisfying its constituency, attempting to align with broader government policies and objectives, institutional rivalries and the presiding economic environment. In addition, to the tariff setting constraints detailed above, MEU's operate under a framework that imposes major conflicts, the most relevant being:

#### National Energy Efficiency and Renewable Energy Targets (NEES)

The NEES of 2005, set an overall voluntary target of 12% by 2015, using 2000 as the baseline year<sup>128</sup>. The residential and commercial voluntary target was set at 15%. The post-2015 NEES<sup>129</sup> found that energy intensity improved by 23.7%, significantly more than the 15% target. However, the post-2015 strategy does not distinguish between the individual contributions of autonomous change (changes in structure of the economy), technological advancements and deliberate policy interventions – where the first two would take place irrespective, and thus this figure merely serves as a proxy to efficiency improvements

<sup>128</sup> Since the NEES was published this metric has always been uncertain, primarily because of the paucity of the available data and Department of Energy's inability to provide clear guidance

<sup>129</sup> As at end 2017 has been circulated for public comment and finalised but as yet has not been adopted by Parliament

and not a like for like comparison<sup>130</sup>. The dilemma faced by CP, which is the case for all municipal distributors, is the split incentive dilemma they face. On the one hand, under the constitutional requirement of co-operative governance between the three spheres of government, CP (as are all MEU's) is obliged to implement national policy, which targets reduced electricity consumption. The implication thereof is a reduction in revenues. On the other hand, CP's sole shareholder who sets annual tariff increases, relies upon the electricity trading surpluses to fund its operations and allocate an annual budget to CP. Clearly, there is little incentive for the CoJ or CP to actively pursue a nationally set voluntary target. The only area of congruence, where CP has an incentive to promote energy efficiency amongst smaller users, is those they subsidise or who have a high percentage of bad debt. If the 2008 supply shortages are thrown into the mix, the CP strategy is understandable - A combination of measures for low income programmes, which also satisfies social welfare objectives, and load shifting over a total net reduction.

*"If a consumer is using outdated and very inefficient lamp at night, when our Eskom tariff is the lowest, then that is not my problem. But if someone is using high consumption inefficient equipment in winter during peak periods, when I can only recover part of the tariff (selling at a loss) then I am going to do something about that."* Paul Vermeulen (City Power, 2017)

Under energy efficiency and demand side management, the 2015 and 2016 CP Annual Business Plan uses the future, rather than the present or past tense, which in a nutshell explains the status. The measures put forward are listed in Table 7-16 and evaluated, where Status is 1= implemented (no assessment or measurable level of success provided); and 2= failed or no large scale action taken to date.

Table 7-16: Summary and Evaluation of City Power Energy Efficient Programme

Measure	Comment	Category	Status
Non-electrical Solar Water Heaters	Funded by a DSM surcharge on consumers. 43 000 units installed in low income area	Low income	1
Ripple control	Electric water heaters can be centrally disconnected during periods of peak demand and supply shortages. Controllers were installed in the 1980s but have not been maintained and new controllers have not been installed as planned, rendering the system ineffective	Load shifting	2
Smart meters	Under a programme of load sharing (during load shedding) the city could reduce demand centrally to avert blackouts. The technology would also allow for the long-anticipated introduction of ToU tariffs. Smart meters were installed but CP has not been able to communicate remotely with them, meaning that manual meters reading is still required	Load shifting	2
Gas for cooking	Encourage households to convert from electric to gas stoves, as they are generally used during peak periods	Load shifting	2
Street lighting	Convert to efficient lighting. 40 streets were targeted	Conservation	2
Building retrofit	An initiative to upgrade municipal buildings with energy efficient technology	Conservation	2

### Single Supplier (Eskom) means that CP is a 'Price-Taker'

The legislative structure forces CP to buy from Eskom. A *"very small contribution is sourced from Kelvin power station"* (Power 2016) and negligible amounts from IPPs. The existing legislative structure does not

<sup>130</sup> Declines in energy intensity are a proxy for efficiency improvements, provided: a) energy intensity is represented at an appropriate level of disaggregation to provide meaningful interpretation, and b) other explanatory and behavioral factors are isolated and accounted for. See <https://energy.gov/eere/analysis/energy-intensity-indicators-efficiency-vs-intensity>

support municipal generation and private sector generation must obtain a generation license from NERSA (with very few granted of any scale), or under a ministerial determination, such as is the case with the REIPPP Programme. Kelvin can supply CP for historical reasons, and any additional IPP generation qualifies as demonstration projects, own use, or falls under a minimum threshold. This creates two issues, one direct and the other indirect, both with adverse consequences. The first, is that CP may not generate its own electricity, as it did very successfully in the past, and which is now viable with RE technology advances which have improved performance and reduced costs. The research found that during the 1980s, when Orlando was operational, CP was able to negotiate discounts from Eskom. Conceivably, creating a competitive environment would result in a similar outcome. An added benefit would be improved energy security. The indirect effect is that Eskom continues to maximise its returns from the residential and commercial sectors, with a revenue to sales ratio of 1.56. While the same ratio for mining is 0.96 and industrial sector is 0.82 (Thopil & Pouris 2013) - effectively selling electricity to these sectors at a discount. Coupled with the City's requirement for high returns to fund other functions, the price of electricity in Johannesburg is the highest in the country Table 7-17. Thus, the city continues to lose large users who are moving to surrounding areas that offer a lower rate. Eskom, Tshwane and Ekurhuleni are near. CP, citing the property owners' association believes commercial office rentals are R8/m<sup>2</sup> in Sandton. High volume residential users are also responding by reducing consumption and / or generating their own power (next section)

Table 7-17: Average Municipal Effective Tariff (Revenue from sale of electricity / units sold)

Metro (c/kWh real = 2015)	2007	2008	2009	2010	2011	2012	2013	2014	2015
Cape Town	45	45	56	71	81	91	96	96	99
eThekweni	47	50	56	70	81	91	95	94	102
<b>Johannesburg</b>	<b>53</b>	<b>55</b>	<b>70</b>	<b>85</b>	<b>108</b>	<b>144</b>	<b>141</b>	<b>148</b>	<b>140</b>
Ekurhuleni	46	45	53	69	98	111	112	113	120
Tshwane	48	52	60	74	86	96	102	103	113
Nelson Mandela Bay				68	77	91	96	93	96
Average (Metros)	48	49	59	74	92	109	111	111	114
Eskom (Average to munis)	27	27	33	41	47	57	61	63	63

Source: Eberhard (2015)

### Embedded Generation and the Death Spiral

The 2003 Renewable Energy White Paper targeted a 10 000 GWh saving over a 10-year period. Little was done to achieve this target, and it was the national SWH rebate programme, launched and administered by Eskom in 2008, that showed some intent. South Africa's hosting of the UNFCCC Congress of the Parties 17 in 2011, saw tangible commitment and the will to achieve the target. In the residential sector, high electricity tariffs, supply shortages (blackouts) and increased environmental concerns, combined with the drop in the price of photovoltaic systems, has seen their increased uptake in households and small business, with CP estimating that 30 MW has been installed in Johannesburg. This exacerbates the utility 'death spiral', which is an international phenomenon, and may spell the end for utilities, as embedded generation results in revenue erosion, declining profits, rising costs and weakening credit metrics. This prompted studies (see Janisch 2013) and internal modelling by municipal distributors. The industry called for NERSA to pronounce guidelines and regulations, but after issuing a discussion document in 2015 followed by guidelines, they were withdrawn and would be included in the Department of Energy's new licensing requirements for all generators. However, this regulation does not provide much detail, other

than to make generation less than 1 MW exempt, subject to an agreement with the distributor. NERSA's silence on this matter is deafening and unhelpful. CP has implemented a policy of paying only 40c / kWh for electricity generated, way below the over R1.50 / kWh it charges for supply. Very few are enticed by the offer and opt to install outside the structure. CP acknowledges this is a problem, but as with their DSM programmes, they have taken a backseat as Eskom has stabilized supply with no blackouts in over a year (early 2017).

### 7.6.3 Right of Reply – City Power Management's Response to Research Findings

A meeting was held with Mr Quentin Green (Chief Financial Officer) and Mr Louis Pieterse (Director of Engineering) on October 31, 2017. The objective was to gauge their response to some of the key research findings<sup>131</sup>, and to get their perspective on past, present and future issues confronting CP.

The deteriorating state of the distribution system was indeed confirmed. An aging system, which in many areas is over a hundred years old, has been further compromised by the amalgamation of eleven electricity departments in the mid-1990s, each with its own design philosophy. Much needed capital investment to maintain the system has been kept to an absolute minimum - in part because of the uncertainty that presided from 2000 until REDs was finally called off in 2010 - but primarily because of the longstanding policy of "relief of rates". The time to replace and expand the entire system is fast approaching, and in truth has probably passed, as many sections are overloaded. Having consistently "sacrificed" most of its capital expenditure<sup>132</sup> budget requirements to the CoJ, CP cannot afford to replace the system, and is looking to national government for the required funding. Given the contribution that Johannesburg makes to the national economy (16%), it is Mr Green's view that it is incumbent upon national government to recognise the risk that the poor state of the electricity distribution system poses to the country's fortunes and prioritise the investment needed. Mr Pieterse confirmed that the DoE had recently presented an asset management methodology to all MEU's, which in his opinion is a very well-considered framework. However, given that the Department has not, for some time now, honoured any of its existing financial obligations to the CP, their concerns revolve around 'if and when' the Department will have the funds to implement the programme. A funding solution put forward by Mr Green is the revival of the loan levy, which was used successfully during the 1990s. Under this scheme, the existing DSM levy would be increased from 0.02c/kWh, to say 0.06c/kWh and the proceeds would be used to upgrade the system. The loan would be returned to consumers in the form of a stable and strengthened system, as well as lower future tariff increases.

It was also asserted that a major drain on CP's finances is the unjust standing arrangement between the undertaking and Eskom regarding public lighting and traffic lights. CoJ residents are, more or less, shared equally between Eskom and CP, but the latter solely bears the electricity and maintenance costs for these public services. Why and how these arrangements came into effect, and why they remain, was not explained. It was however stressed that the resources (time and effort) are indeed material, accounting for as much as 12% of the CP annual repair and maintenance budget.

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<sup>131</sup> As only one hour was offered for the meeting, it was not possible to cover all the research findings. The summary of the meeting was sent to both for their review and comment.

<sup>132</sup> Mr. Green stated that the CoJ generally approves the annual operational budget submitted to it by CP. Having previously worked at CoJ, there is a common understanding of the budget process and the acceptable limits

The duo also shared the view that the existing and exaggerated policy of cross-subsidisation could not continue and that cost-reflective pricing would have to be introduced. High electricity tariffs to fund municipal functions has affected consumers, who are responding by reducing their usage or with businesses migrating to areas where tariffs are lower, as can be seen by the declining annual growth:

2012 = -0.8%; 2013 = -1.84%; 2014 = -1.58%; 2015 = -2.08%; 2016 = -1.63%; and 2017 = -0.06%.

This prompted the question about the accuracy of figures pointing to domestic conventional electricity user tariffs being subsidised by 22.7% (Table 7-18). Here the “user” is the post-paid residential customer (middle to high income category), who typically consumes in excess of 1 000 kWh/month; with affluent users consuming significantly higher levels. A tariff information guide issued by City Power (2017) to explain the impact of the 2017 tariff increases to the consumer, calculated 450 kWh of usage (including all system charges) at 211.11c/kWh for post-paid and 128.17c/kWh<sup>133</sup> for pre-paid. The difference between the two is significant; thus at face value, a negative value for pre-paid is understandable, but why for post-paid? Mr Pieterse stated that the table is correct and that he would forward the study explaining the reasons for this. Hereto however, several requests for the study have gone unanswered.

Table 7-18: Levels of Cross-Subsidisation at City Power (2015 / 2016)

TARIFF CATEGORY	Cross-Subsidisation	
	Contribution (Rm/annum)	% Potential Charge
Domestic pre-paid	-434	33.4%
Domestic post-paid	-876	22.7%
Agricultural	-1.0	49.7%
Business	66	-7.9%
Large Users (MV)	540	-13.4%
Large Users (LV)	705	-18.8%

**Explanatory note:** *Positive contribution values indicate inflows (revenue) to the cross-subsidisation account, while negative values indicate outflows (pay-out) to the specific tariff categories. It is evident that “Large user” and “Business” categories contribute substantially to allow the subsidisation of the domestic and agricultural sectors.* **Source:** City Power (2016, p.90)

It was also strongly asserted that Mr Green and the senior CP management - supported by the Board and the CoJ - are “waging a war” against internal and external theft and corruption, in an attempt to reduce losses in line with the NERSA recommended mean of 10% (see Table 7-15). Indeed, dishonesty in various guises has resulted in massive losses to CP, compounded by the concomitant loss of economic activity and the impact on safety in the city during protracted power outages<sup>134</sup>. According to Mr Green, their efforts are paying off and non-technical losses are at levels last-seen five years ago. There was little though that CP could do to reduce technical losses below 9% - due to the age of system. However, the figures provided at the meeting do not correspond with those from the audited and published CP financial statements and business plans. Mr Green disputed the low non-technical losses reported between 2009 to 2011 as being too conservative a figure, but was not able to explain why the figures varied and on what basis they were audited and published.

<sup>133</sup> The pre-paid tariffs are marginally higher than the post-paid tariffs (~6c/kWh), but are not charged a monthly service charge (R114) and network charge (R337). CP applies a block tariff, the tariff increase by 16c/kWh after 1 000 kWh, and again at 2 000, and 3 000 kWh.

<sup>134</sup> In September 2017 cable thieves gained access to the underground tunnels and melted 36km copper wires which plunged the CBD in darkness for several days and cost the utility R15 million.. Copper cable is stolen on a daily basis



Figure 7-22 compares the published non-technical loss figures against those provided in the interview. *Note:* A figure for 2017 has not been published yet. Technical losses are not included, as both sources report them to be 9%.

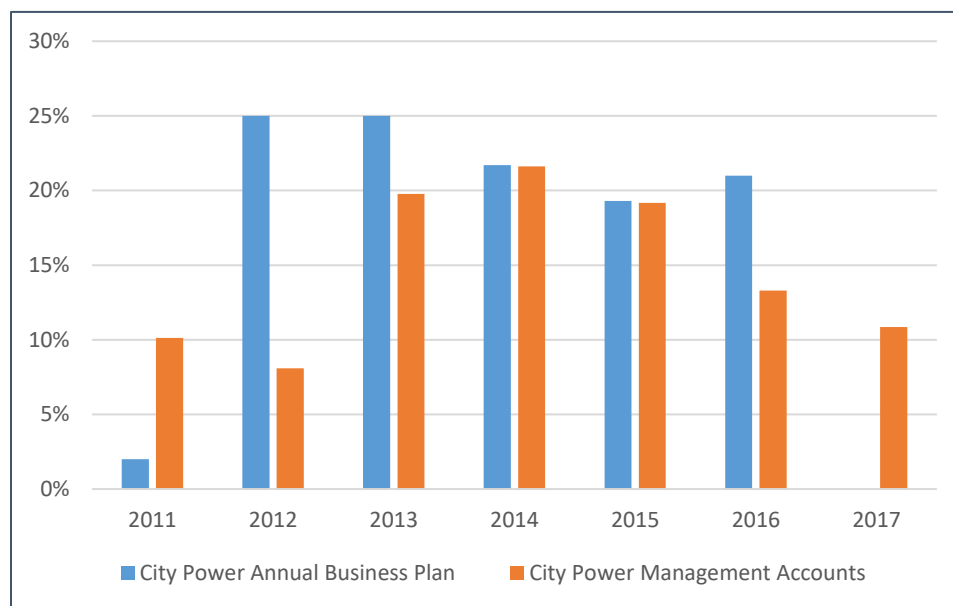


Figure 7-22: City Power Non-Technical Loss Percentage – Audited versus Internal (2011 – 2017)

Ultimately, beyond the various challenges unpacked above, Mr Green believes the biggest threat to the CP business model has been the consistent erosion of gross margin:

2011 = 38.6%; 2012 = 33.9%; 2013 = 31.8%; 2014 = 29.8%; 2015 = 28.25%; 2016 = 27.8%; and 2017 = 26.7%.

Here, the primary stated reason behind the decline in gross margin, is Nersa’s limitation on annual increases. Another contributing financial factor is the time-lag, (approximately 20 days), between CP paying Eskom for electricity purchased and collecting revenue from its customer base. This is a major driver for the utility encouraging existing, and requiring new consumers, to take their supply on a pre-paid basis.

Finally, Mr Green acknowledged the threat of embedded generation and energy efficiency, but however believed that it is still a long way from impacting their business. In his view, less than 2% of the customer base is currently either willing or financially capable of investing meaningfully. It is also believed that energy efficiency programmes undertaken by CP are necessary, but are minor in comparison to the total business, and thus have a very small impact on the overall sphere. Then, ending the meeting on a positive note, Mr Green supported his assertions regarding the effect of price increases, by pointing to the annual growth / decline consumption figures (listed above), which have flattened out (-0.06%) - possibly suggesting the tariff increases have been absorbed - with CP expecting consumer electricity purchases to start growing again.

#### 7.6.4 A Historical Institutional Perspective

The third and final critical juncture identified - the 1996 Constitution which elevated local government to one of the three spheres of government - occurred in tandem with multiple political and technical ESI developments. Thus, here, in examining the context that these developments created, the analysis commences at a broad level, via national government and Eskom, and then narrows down to the MEU's and more specifically the JEU. Indeed, the interrelatedness of all the players in this environment and particularly the "special" relationship between government and Eskom, sometimes results in what may seem as repetition in the analysis; but is a direct product of the powerful impact that they had on each other, which has to be viewed from their individual perspectives.

From the outset, when one in broad terms assesses the ESI at the advent of democracy, unsurprisingly the immediate post-apartheid period was dominated by the need to not only expand, but accelerate and formalise the electrification initiatives started by Eskom under their "Electricity for All" programme. This was particularly pertinent given that the overall electrification rate in the country in 1990 was an unflattering 35% (Statistics South Africa, 2012<sup>135</sup>), where WLAs enjoyed almost universal access, while BLAs did not. Indeed, under such circumstances, the pressure on the newly installed GNU to develop policy to urgently redress chronically inequitable access to electricity, held the potential of serious implications for Eskom – especially since the spectrum of consequences stemming from government action, intended and unintended, was profound. Here, at the one end of the scale, Eskom stood to lose the long-standing operational independence from national government that it had always enjoyed (as detailed in Chapter 6.5.2). Of greater concern was a real threat to the monopolistic vertically integrated model that it had painstakingly developed over the previous decades. It was therefore undoubtedly in Eskom senior management's interest to ensure that they were intimately involved in policy formulation and implementation. Thus, by being ahead of and embracing proposed changes, Eskom stood every chance of maintaining the status quo - a strategy that Maree and McRae successfully adopted from 1985 in implementing the De Villiers' recommendations - described in McRae's own words: *"I had seen all over Africa how disastrous such political interference could be. We had to keep the government out of the engine room."* This proven approach could now once again be deployed to address the organisation's post-1994 challenges, which ostensibly were a continuation (albeit a deepening) of most of the 1985 and 1991 action points mandated by the DME, as we will see below. Indeed, the research has found no evidence to suggest that Eskom, and by inference McRae and Maree, changed their position. The highly coveted engine room remained strictly for Eskom engineers. And the manner with which this was achieved, was ingenious.

In observing Eskom's timeless quest for 'engine room independence' and growth above all else, in Chapter 6.5 the research found that from 1970 Eskom was able to manifest its aggressive new power plant build programme, and notwithstanding the De Villiers commission's recommendations, still managed to build five of the six planned power plants by 1995 (Phase III and IV); regardless of strong evidence that not all were needed or affordable. This is a clear example of the "sticky" culture which continuously sought to amplify the growth trend. In such regard though, Baumgartner (2002) warns that left unchecked, a positive feedback loop will ultimately lead to an unstable system and self-destruction, which is precisely the situation that Eskom, with a 38% reserve margin (Figure 6-9) and a stagnant, even shrinking, economy,

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<sup>135</sup> South African Electrification Programme (<http://energy-access.gnesd.org/cases/22-south-african-electrification-programme.html>) Energy Research Centre, University of Cape Town – Prasad, G.

had begun to flirt with in the early 1990s. Such a massive over-supply of electricity meant that Eskom needed to stabilise its position by switching to a negative feedback – reverting to the thermostat analogy from Chapter 2.3.3 – with the objective of maintaining a set temperature. Which it did. The carefully considered transition was seamless; involving the simultaneous co-existence of a positive and negative feedback loop - the former of which was the completion of the new power plant build programme, which then paved the way for the latter. Indeed, by prioritising and implementing the ANC's RDP objectives before the ANC had even conceived, let alone requested such from it, Eskom dealt a strategic masterstroke.

When looking at Eskom's relationship with government in all this, (following-on from the re-emergence of De Villiers who was now serving in FW de Klerk's early 1990s cabinet as an economic adviser), Eskom (Chapter 7.5.2), agreed with national government to implement four objectives. These are listed below and extended to the post-1994 era, to demonstrate their relevance and how they amounted to action by Eskom that was designed to appease the GNU and then ANC government:

- **Price compact:** Nominal tariff increases remained below the inflation rate until 2003<sup>136</sup> (Figure 6-8)
- **Electrification targets:** At its peak, Eskom was electrifying over 300 000 homes per annum, and was the primary contributor to shifting the national average from 35% to 66% by 1999 (Borchers 2001, p.iv). The utility was also cooperating and coordinating the electrification programme with the MEU's;
- **Technical and financial position:** Eskom re-established itself as a world class utility. Financially, reaped the benefits of its low capital requirements and cost cutting measures from the early 1990s, which for example resulted in the workforce dropping to 39 000 from 66 000 by 1995, and 30 000 in 2005;
- **Promoting black employment:** Technical and management positions occupied by black personnel went from 5% in 1993 to 50% in 1997 when Maree retired (Chapter 6.6.2). Followed by an aggressive short-term quantitative employment equity target, whereby 50% of senior management positions would be occupied by black employees.

Within this context, Eskom's high-performance levels meant that national government could focus on other areas, as it could not achieve more or do so any better or faster. Additionally, there was no reason to suspect that Eskom's actions were in any way insincere. It harmonised its objectives with those of the ANC's RDP. The new millennium, however, saw the confluence of several items that had been simmering in the background: Firstly, the cost of the electrification programme had started to mount, R8 billion in total by 1999 (nominal). Moreover, after a decade or so of electrification, the DME was theoretically better capacitated to undertake what essentially was a government function and Eskom needed to switch its focus back to its core business; with a decision thus taken for the DME to take responsibility for the second phase of the NEP from 2000. However, and as an interesting example of the impact of unintended consequences, Eskom's ability to electrify 2 500 000 households made it a vital aspect of a key element in the new government's process of attaining and maintaining perceived legitimacy. In this, it not only left the "engine room" door ajar, but laid out a welcome mat which the politicians quickly seized. The second simmering issue was the fact that the Energy White Paper (1998) and the 2001 Cabinet decision (Figure 6-7) pointed to, as Eberhard's 2001 paper (pg 25) concluded, a "*fundamental restructuring aimed at increasing competition in the (ESI) sector*". National government signalled its intent by placing a moratorium on Eskom's construction of new power stations, even though demand from the newly electrified households and economic growth had seen the reserve margin drop to ~20% and the Energy

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<sup>136</sup> After the 1994 democratic elections (even though the price compact was still in force) Eskom undertook to reduce the real price of electricity by 15% between 1995 and 2000 (Conradie, pg 325)

White Paper itself predicted a supply deficit by 2007. Eskom was indeed facing a new operational reality. Thirdly, while the high capital costs of electrifying new households were one thing, the low electricity consumption and increasing levels of non-payment by consumers (be it due to an unwillingness or an inability to do so) and by municipalities (bulk supply), was another; and this began to materially erode Eskom's finances. Finally, and very significantly, when Eskom was 'riding high', a litany of poor decisions and choices were made (Chapter 6.6.2 – Eskom in Crisis Again). Ultimately, they created the foundation of the crisis which was to unfold from 2005 and were epitomised by the decision to build the two mega power stations of Medupi and Kusile; marking the formal starting point of Eskom reeling from one fiasco to the next and of politicians taking centre stage at Eskom for the first time in its 90 year history. Here the period of 2000 to 2005 aligns with the thoughts of North (1990) and Baumgartner (2002) in Chapter 2.3.3 (Punctuated Equilibrium) who contend that change is "*not as sudden as it may appear*" and often on the back of long periods of seeming inactivity.

In the 20 plus years following the 1994 elections, two diverging realities appear to have been at play: policy and practise. Recognising that the existing ESI model which had been in place for decades, had outlived its usefulness, it would appear that government's objective in overhauling the system was to address policy and practises that had become unsuitable or defective, through reform, as opposed to change, which would simply mean doing things differently. Certainly, at face value, reform was necessary to deal with challenges that included: far too many MEU's (over 400) and each with their own tariff structures; non-cost reflective tariffs; many medium and smaller sized MEU's operating at a loss; capital investments to maintain and service the EDI infrastructure now lagging; smaller and medium sized MEU's unable to retain and hire competent staff; and finally, efforts to reverse the practise of non-payment and theft of electricity, not only failing, but the situation in fact getting worse. Here in seeking a solution, national government's approach was certainly not haphazard. Nationally, it organized and participated in extensive public consultation, public forums and committees (NELF, EWG, EDIRC and ERIC), while internationally engaging with global agencies (World Bank, IMF, USAID and others), as well as academics, who provided updates on the latest international thinking and experience. This led to the Energy White Paper (1998), followed by cabinet's endorsement of REDs, the creation of EDI etc. and indeed, in policy, in the strongest possible manner, with a cabinet decision (Chapter 6.6.2) which implied reform was certain. Alas, in practice, little was achieved. Private sector investment did not materialise, the REDs programme was terminated in 2010 and by 2015 the ISMO in the DoE's director general's own words was "*off the table*" while ADAM in 2017 is progressing so slowly, that it is anyone's guess if anyone is working on it all. One small victory perhaps was that the number of municipal distributors did decrease to under 180, but still significantly more than the six targeted under REDs.

In fairness, the one shining light has been the grid electrification programme which had reached over 90% by 2016<sup>137</sup>. Unfortunately there is a BUT in this too, because as life-changing as access to electricity has been for the millions of households who are now spared the drudgery of collecting firewood or using unsafe and / or unhealthy alternate energy sources<sup>138</sup> (coal, paraffin, candles), the programme has fallen way short of the RDP objectives of translating this into economic productivity gains – making the supply unaffordable for service provider and the consumer. In addition, the research also recognises that grid electrification will not automatically result in the displacement of fuels such as paraffin and firewood for cooking, and that this particular phenomenon is well established in Africa for a variety of reasons (see Sustainable Energy Africa: Household Energy Access page 248).

<sup>137</sup> <http://www.eskom.co.za/news/Pages/Jun4.aspx>

<sup>138</sup> <http://www.sustainable.org.za/userfiles/household.pdf> page 249

In hindsight, little reform was ultimately achieved and at best some change occurred primarily through the process of drift (where the impact of existing rules was affected due to environmental shifts). The impact of this context on local government and MEU's however, was profound; and it is this that we now turn our attention to.

Electricity distribution was an exclusive municipal function as decreed by the 1910 Power Act - which was clearly highly prized, as evidenced by the bruising battle with Eskom at the 1969 Margate Agreement. It was therefore curious to note local governments' slow and limited response to electrifying adjoining townships in the late 1980s, which they knew was necessary, inevitable and urgent. This unwillingness to act, presented Eskom with the opportunity to wrest control and drive the electrification programme, and warrants closer consideration. Here, although unwilling to electrify townships, MEU's immediately raised their objection with Eskom's most senior management for encroaching on their domain. Eskom was, somewhat easily, able to placate the MEU's, on two grounds: The first, was Eskom's assurance that they had no intention of violating the long-standing agreement and that any takeover of Eskom's systems by municipalities would be done so on economic grounds. The second, cut to the heart of the matter. MEU's, aware that their adjoining townships would have to be electrified, knew that this could only be achieved if the surpluses generated from electricity sales and / or other revenue were made available by the municipal treasury. This would not be straightforward for several reasons: 1) Most of these households could not, and many would not pay; 2) Even if they did pay they were unlikely to consume sufficiently large quantities to make the investment economically viable; and, 3) The investment that would be needed to build new networks, even if economically viable, would require the diversion of surpluses earmarked for white suburbs, which would lead to lower service delivery levels to the *de facto* electorate, which had the high probability of political ramifications for the white councillors.

Ultimately, the combination of these factors resulted in municipal treasury and local government politicians not sanctioning electrification – the former on financial grounds and the latter for reasons of electioneering. Unfortunately, neither chose to recognise the moral imperative and were seemingly unwilling to act in order to start closing the inequality gap between white and black neighbourhoods. Ironically, indeed predictably, politicians and treasury now adopted the MEU's decades-old argument against cross-subsidisation and the need for cost reflective tariffs (see Chapter 7.4.1 Period 3). The MEU's thus decided in the short term, to turn a blind eye to Eskom's "Electricity for All" programme; but allocated significant time, effort and resources through the AMEU, in developing a viable strategy to address what they finally and reluctantly recognized would be an issue they could not only no longer ignore. and which as the mandated distributors of electricity, they needed to deliver upon. The alternative, once unthinkable option, would be to cease being the sole distributor of electricity in urban areas. The AMEU's strategy however, came to little - overtaken by nationally coordinated events regarding electrification, which were a combination of having to play catch-up with Eskom and taking direction from the new regulator (NER), packed with former Eskom employees, including McRae as CEO. Unsurprisingly MEU's were on the short end of most decisions.

Simultaneously at national government level, the transition to democracy appeared to be about acceptable concessions; key amongst these being the safeguarding of minority (white) rights. Here, as detailed in Chapter 4.5.2, the NP pushed hard for a decentralised approach to local government, while the ANC was arguing for simply taking-over the existing system, which aligned with their long-held centralist ideology. Here, the NP's decentralist motivation was two-fold. The first reason revolves around the recognition that they would not win the national election, but that they could maintain enclaves in

existing white neighbourhoods, which under a decentralised approach could operate, more or less, as they had been, for the foreseeable future. The second reason, as Bekker (1988: p. 30) pointed out, is that the NP knew all too well how a highly centralised state could wield power. The elevation of local government to a sphere of government however, meant little without financial autonomy (Chapter 3). Thus, the 1996 Constitution allocated dedicated and exclusive revenue raising functions, *inter alia* electricity distribution, to local government. The ANC, in accepting this inclusion were not conceding, but had changed their viewpoint to that of developmental local government (Chapter 4.6.2) as an appropriate means to address the inequities of the past - which could not be achieved if municipalities could not raise the required revenue. Additional motivation for the ANC, is that it added a political layer (distance) between itself and the electorate, and the view that local government was closer to the people and theoretically in a better position to grasp and satisfy their needs (Chapter 3.3). Through displacement (remove and replace existing rules with new ones), the ANC (Chapter 4.6.1) did obstruct the continuation of strong white controlled local communities, by demarcating boundaries to make them more inclusive and representative, and to redistribute political power.

These political developments had serious knock-on effects for the municipal EDI. The positive spin off was that the constitution not only safeguarded the revenue source, but ensured its protection under the highest law of the land. There was however a price to be paid. The new, and much larger municipal boundaries meant that MEU's had to be amalgamated - creating operational, technical, financial and policy challenges - many of which remain in 2017. Technically for example, MEU distribution networks had developed over many decades, with each MEU adopting a specific design philosophy, such as radial, ring, main, parallel and meshed. For Johannesburg this became, and remains, a particular issue. Here, the challenge of the large number of MEU's that had to be amalgamated (Table 7-11) to create City Power<sup>139</sup>, was further compounded by former long serving Eskom employees now employed by City Power due to Eskom's downsizing and the staff retention problems experienced at the JEU in the mid-1990s. These ex-Eskom staff members had a natural bias towards its distribution design, and proceeded to consolidate the expanded network on this basis, rather than continuing with the original configuration - creating a disjointed and technically inefficient system. The budgetary constraints of a municipality in high financial distress at the time, ultimately may have led to the system being 'made' to work; but the combination of these three factors did result in several long-term negative outcomes - a distribution system with higher technical losses, outages and costs. From a financial perspective too, the MEU's were also being squeezed on two sides. On the one, they were expected to electrify new households, which they knew were not financially viable or sustainable and that the only way to do this would be through internal cross-subsidisation. On the other side however, any surpluses generated by an MEU, and often more, were allocated by the municipal treasury to cross-subsidise other municipal functions. Indeed, in a positive feedback loop, this practise was exaggerated from 1994 onwards, to pay for the urgent need to deal with the backlog of services and poor performance of municipal employees (Chapter 7.6.1). Finally, as regards policy ramifications, municipal EDI was facing an uncertain future. Indeed, the AMEU's internal research from as far back as 1989 (Chapter 7.4.1 Period 3) had concluded that the current model was unsustainable and that the number of MEU's would have to be reduced significantly - to fewer than 70. National government had similar ideas, but its thinking was more along the lines of just 6 or 7 REDs. Regardless, the consequence was a clear signal to all municipalities that operated MEU's, to reduce capital and maintenance expenditure, so as to avoid a stranded assets scenario until a final outcome had been agreed. Here, the AMEU took a proactive stance and engaged extensively with national government and Eskom,

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<sup>139</sup> P Vermeulen (City Power) during an interview 27 January 2017

but as the research has found, their ongoing input enjoyed little consideration - a curious response from national government, given how vocal municipalities were during the consultations and that they had unambiguous constitutional cover. Ultimately then, the decade of deliberations before REDs were finally scrapped, resulted in the predicted negative (feedback loop) outcome of very limited capital investments (stasis) in the municipal distribution systems – a root cause of the decline of the system, which in 2017 had an estimated refurbishment and maintenance backlog of as high as R80 billion.

Looking back, more than anything, the period prior to and after 1994 was one that touted wholesale reform to improve service delivery. The review however, has shown that little has come to pass, other than the licensed municipal distributors dropping from 400 to ~187. Electricity distribution though, remains a primary contributor of municipal revenue, as it always has. Indeed, the self-reinforcing path dependent phenomenon of increasing returns, which has been in a prolonged positive feedback loop state to fund other municipal functions, not only has seen warnings about its unsustainability dating as far back as 1930 go unheeded, but has been significantly ratcheted up since 1994, despite national government policy to chart a new path. And while this is a situation that historical institutional theorists warn will ultimately lead to punctuated equilibrium, at the moment, the current positive feedback loop is being accentuated by technological developments in energy efficiency and renewable energy, as well as failings at Eskom, which has led to high tariff increases and an unreliable supply. Thus, it is abundantly clear that municipal EDI is under extreme pressure, as it faces a variety of challenges ranging from consumers reducing their usage, to localised outages, losses (technical and non-technical outages) and maintenance costs - the combination of which, at the very least, certainly means lower surpluses. The reality that the 'golden goose' is no longer able to serve the municipal treasury as it used to, is becoming a harsh reality, leading to more intense, frequent and vocal public discourse from local government (SALGA, CIGFARO and the municipalities themselves) on how to address the matter, as detailed Chapter 5.2.2.

## 8 Conclusion

### 8.1 Introduction

The research has thus far delivered a detailed historical account and institutional analysis of municipal ESI. This concluding chapter now examines the theoretical and policy conclusions of the study findings via the research approach adopted. Herein, the policy dimension illustrates how national government from formation of the Union (1910), pursued, and continues to pursue, two fundamental but diametrically opposing objectives, whose inherent contradictions drive an enduring conflict, reaching fever pitch in the last 20 years: 1) An over-burdened, financially 'self-sufficient', local government with limited scope to collect revenue needed (property tax and surpluses from services – with the majority by far being raised from electricity sales) to administer its mandated municipal functions; and, 2) A vertically integrated utility. Complicating matters even further, are conflicting national objectives, where on the one hand neo-liberal economic policies adopted by government are supportive of cost reflective tariffs to enhance competitiveness and productivity, yet on the other hand national policy calls for developmental local government where a significant portion of funding is sourced through cross-subsidisation. The research has shown that this dichotomy has, and continues to be, the basis for the discord that exists in the ESI – leading to broader political and economic fallout for the country, and to the death knell of municipal EDI reform from the late 1990s. This was demonstrated once again from 2010 as a new and imminent structural crisis, the so-called death spiral (Chapter 7.6.2), threatens the entire ESI industry but EDI specifically. Yet government's (national, local, NERSA and Eskom) failure, perhaps even inability due to lock-in, to adequately deal with the crisis is impacting negatively on developmental local government – particularly service delivery. Left unresolved it will undoubtedly result in the same impasse (failure to restructure) but with graver economic and political consequences.

The approach of the concluding chapter is thus relatively straightforward; commencing with a summary of the first research objective, the lifeblood of the research. The research questions and the second research objective is then addressed. The chapter ends by providing an overall assessment of the research findings and prospects of future municipal EDI reform.

### 8.2 History and Electricity Matters (Research Objectives)

Research objective one consists of two parts. The first; to document the political origins and development of municipal ESI. The second; to assess the effectiveness of applying historical institutionalism to do so. Part one was deemed necessary because a consolidated and detailed chronological narrative on this subject does not exist. Where it does exist, it tends to be one-dimensional - representing a specific viewpoint, be it political, economic or technical. The implication is that analyses on outcomes or institutional arrangements tend to be narrow or simplistic. This research, validated by existing academic ESI research (amongst others: Christie, Marquard, Horwitz, Fine and Rustonjee, Steyn, Conradie and Messerschmidt), recognises that municipal EDI is complex. Thus, in differentiating itself from existing work, the detailed tracing of historical events and decisions taken by institutions associated with this sector, allows this research to provide a multi-dimensional analysis of various perspectives and their intrinsic inter-connectedness; crucial to understanding EDI outcomes and genuine reform succeeding. The research has identified multiple examples of history repeating itself - desirable if outcomes are positive but surely not the opposite. At national level, from 1910 we saw three periods where one party (ideology) ruled exclusively. All attempted to industrialise beyond minerals, through economic policy. For example,



beneficiation would replace import substitution in the early 1970s (Chapter 6.5) but failed. Reintroduced in 2009 (Chapter 6.6), it did not heed the poignant findings of Fine and Rustonjee (1996) regarding the MEC structure of the economy – echoed over a decade earlier by Christie (1984). Thus, the economy in 2018 continues to stutter, while inequality and unemployment rise. Similarly, national government timelessly supports Eskom; even putting the country's sovereignty at stake. And local government continues to be overburdened and underfunded, even more so given past inequities. Whilst reflecting on the existing primary specific literature this research regularly references, it is worth pausing to consider the extent to which this thesis aligns (or not), and where appropriate adds to them. Marquard (2006, pg 154), Christie (1984, pg 164) and Conradie and Messerschmidt (2000, pg 138) all identify Borckenhagen as the source of the provincial administrator's decision to reject the JEU's application to build a new power plant in the 1960s, spelling the end of municipal generation. This research, through alternate references, not only corroborates these findings but adds deeper insight by relaying the JEU's perspective and how this led to the Margate agreement (Chapter 7.4.1). These three authors recognise the importance of the event but do not detail the massive ramifications this had on municipal revenue. Appropriately so, as it was not the focus of their research. Turning to the subject of cross-subsidisation. Horwitz, Conradie and Messerschmidt, and Marquard all recognise that this was taking place. Escom was offering farmers a non-cost reflective tariff and municipalities were using their surpluses to keep their property taxes down. However, as Horwitz (pg 22) points out when the electrification programme commenced in the early 1980s first by Eskom and then the MEU's, to start, they both insisted on cost reflective tariffs. The logic of this paradoxical requirement for BLA's but not WLA's is difficult to reconcile and the research explores the dynamics and tension between these two institutions in electrifying households until it was taken over by national government in 2000. Indeed, the thesis has expounded on the discord and financial consequences that the policy of relief of rates wreaked over decades. Yet this practise not only continues, it expands, displaying the hallmarks of a path dependent process. It was the single most important reason for the failure of the proposed reforms under RED's, and not the first or last time that it causes discord. History matters – here the thesis builds on Eberhard's inputs during the RED's process by providing more detail, which aligns with his research and views, from the municipal perspective. But before assessing the usefulness of new institutionalism, applied through historical institutionalism, it is necessary to determine whether the second objective and the research questions were adequately addressed using this approach. This aids in-depth theorising of the findings; hopefully contributing to ongoing debates around strengths and weaknesses of historical institutionalism as a research framework.

The second objective was to consider the complexities created by using surpluses from electricity sales to cross-subsidise municipal functions, which conflicts with national priorities. Historical analysis has shown this practise is not new; developed over a prolonged period to satisfy other, but ultimately competing and counter-productive, objectives of national government. Over time these linkages strengthened to such an extent that disentangling them is no longer straight-forward, as the effects are not only universal but likely to be extreme, as shown in Figure 8-1

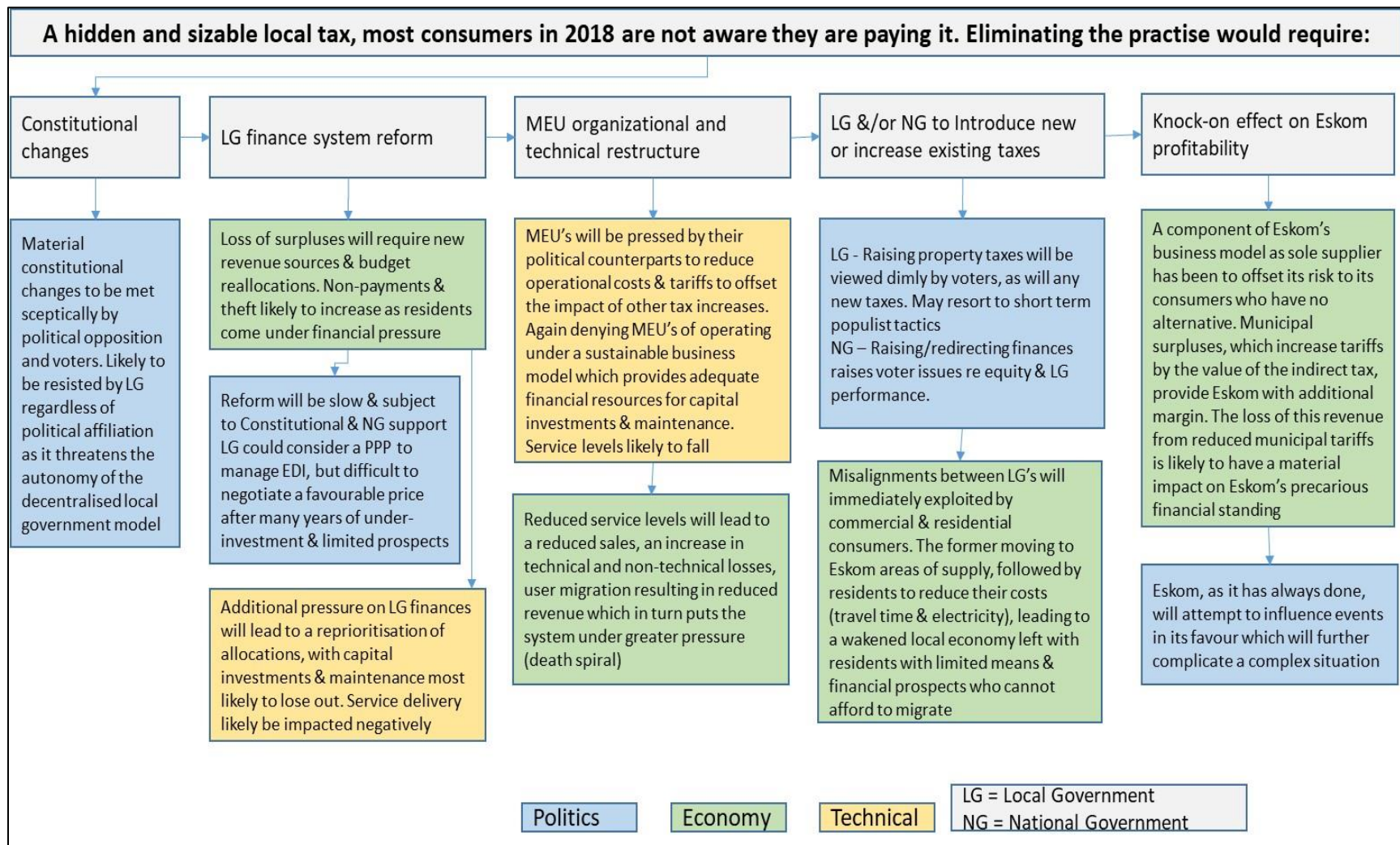


Figure 8-1: Political, Economic and Technical Linkages in EDI

Re-tracing the history of all the actors has shown the complex relationship between the national economy, the three tiers of government and the ESI – where each actor is represented by different government institutions with diverse mandates and interests – thus resulting in the inevitable situation of contradictory / conflicting policy positions and competing objectives. Such a situation may not immediately qualify as being overly unique nor material, as many other functions or services offered by government and its agencies require compromise. But how it unfolds may matter; and for EDI it does. As the research has shown, here, the current institutional arrangements regarding municipal EDI are reaching breaking point, with dire social and economic consequences for all – a situation not receiving the attention it deserves; overshadowed by events engulfing Eskom. However, connection points between these two crises exist. Both shield operational inefficiencies, as well as consumer resistance, manifested at one end by reduced consumption and electricity theft, and at the other through defection (fuel switching and embedded generation), together with more energy efficiency and reduced consumption. Ultimately, national outages caused by mismanagement (coal supply contracts), plant shutdown's (maintenance), delays in commissioning new plants (mismanagement), financial distress (corruption, staff strikes and pay demands) will attract public attention over localised municipal outages varying from MEU to MEU, with equally ominous consequences.

Thus, it becomes necessary to determine the extent to which circumstances matter – to examine how events evolved. Here, two options exist: One; a narrow analysis can be conducted, as was done for the implementation of RED's, which focused on national government priorities. This is not to imply that the approach was rushed or not taken seriously; lasting almost ten years and costing billions of Rands. However, the research pointed out how important factors were sidestepped, under-estimated or flat out ignored - issues which were material sticking points for local government and MEU's. This includes for example, the contradiction and perceived unfairness of the constitution allocating municipal distribution to local government, but under the proposed REDs model, MEU's were required to cede the 'golden share' to national government (see Chapter 7.5.5 for additional examples). The alternative option is a detailed and accurately sequenced historical account of events, providing complete understanding of institutional and policy development. Such understanding is more likely to provide the basis upon which appropriate decisions can be taken. The latter, I would argue, allows for a clearer determination on the extent to which history matters. To date, the former more expedient approach has led to little reform, and if anything, put the system under greater strain. Thus, to contribute towards a resolution, this thesis presents a detailed and holistic analysis which not only introduces new insights but explains the rationale behind the 'stickiness' of existing path dependency. Here, a further distinction needs to be made between understanding historical events resulting in the present-day dynamics of the current crisis, versus attempting to take corrective action. For the former a historical analysis is appropriate, whereas for the latter, a historical understanding is required.

Ultimately, competing institutional objectives are bound to collide with and impact each other. But what happens when this conflict is extreme and allowed to endure for a long period (over 100 years)? In this, the research has tested the theoretical assertion that negative and positive feedback loops can occur simultaneously (Pierson, 2000b; Williams, 2012 - Chapter 2.3.3). Indeed, both look to subvert change; the first by adjusting to deviations; the second by reinforcing the existing path. Here the important distinction between the two is that a negative feedback loop's objective is to remain on a specific point on the path, whereas the positive feedback loop may result in a shift, which may bring about some change, but on the chosen path. Here the research has found that once Eskom and the MEU's had established and secured

their positions on the ESI path, both institutions engaged in negative and positive feedback loops to maintain and retain the increasing returns derived from this chosen path.

In meeting part one of the first objective, this thesis traced the development of municipal ESI from its genesis; with the following unique features. Firstly, although the South African electricity narrative has been told before from different perspectives (Eskom, national policy, politics and apartheid, mineral wealth), the research findings showed that a consolidated municipal and AMEU account does not exist. Secondly, in addition to qualitative research practises of face-to-face interviews, published records and other secondary sources, the hunt for new information also led to the discovery of original and previously unconsidered primary resources (detailed in Chapter 1.6.2), including AMEU committee meetings (1950 to 2017)<sup>140</sup> with additional supporting documentation<sup>141</sup>; AMEU Proceedings Journals from 1915; Merz and McLellan internal library with unique source documents such as project notes, government and municipal reports and minutes of meetings; and , interviews with industry participants.

These 'new' and previously unseen primary research resources proved invaluable, and indeed this research would have been compromised or not possible without them. Firstly, they brought a fresh, accurate, detailed perspective; that of the AMEU – with existing literature on the country's ESI providing a reference point and an opportunity to offer both sides. For example, the consequences of the Margate agreement which stopped the JEU (and all other MEU's) from building new power plants, had massive consequences for the entire country, not just the City. Eskom, having secured its monopoly was able to pursue its aggressive and overly optimistic new build programme. This led to inefficiencies and tariff increases, detailed in Chapter 6.5.2 (Eskom) and 7.4.3 (JEU). Contrast this to a decade earlier when Eskom was somewhat kept in check by a thriving JEU, not only selling it its excess capacity, but making minimal tariff increases and an amiable / professional working relationship between the two possible. Secondly, the meticulous manner in which events were stored (detail and date order) allowed for conducting the research in accordance with the framework's prescripts. As explained in the methodological approach (Chapter 2.6.1), it is easy to get caught up in the euphoria of free-flowing historical story-telling; often resulting in insufficient attention to the order of facts, selective inclusion or exclusion, and conscious or unconscious bias – all of which were ameliorated by the scrupulous detail that such primary research sources came with. Finally, the document research sources were augmented by interviews with individuals present at the time of key events discussed in the study - some as far back as the mid-1950s - providing additional research sources and adding a human element which often cannot be captured in conference proceedings, minutes and personal notes.

We now turn to answering the research questions and concluding an assessment of the framework used.

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<sup>140</sup> Although the minutes of AMEU meetings over the more recent past (20 years) are readily available, with some published on the AMEU website. It is the minutes from 1950 until 1994 which provided great insight as they were all but forgotten

<sup>141</sup> The minutes have been stored for many years and have not been accessed in decades. Invariably some pages and annexes are missing or damaged. Overall however, they proved to be a rich and reliable information source

## 8.3 Summary of Findings (Research Questions)

Research Question 1: What were the political decisions that shaped and continue to influence municipal ESI (EDI from 1969)?

The research, through a historical institutionalist lens, identified specific events; interrogated further to confirm their historical origins and validity as critical junctures, of which there were three: 1) The Transvaal Power Act (1910); 2) The Margate Convention (1969); and, 3) The 1996 Constitution and the Energy White Paper (1998). The first identifies the starting point - the contingent event creating the path dependent and self-reinforcing sequence. The next two junctures mark points in time where a window of opportunity created the opening for a reactive sequence (reversal of events and a new path – change) or was insufficiently able to do so and ‘business as usual’ persevered.

The historical institutionalist framework’s premise is to facilitate meaningful counterfactual analysis by identifying: 1) The time sequence of the initial conditions; 2) The option selected over other available and viable options (the contingent event); and, 3) How the selected event capitalises on its initial advantage to reproduce itself and become dominant (Mahoney 2000, p.514) (Figure 2-3). Key in detecting a critical juncture is the short period during which these policy options are available, followed by the long sequence of positive reinforcement, or institutional lock-in (Capoccia & Kelemen 2007) (Elson 2008, p.223; Capoccia & Kelemen 2007). Certainly, by focusing on events where influential actors are able to exploit situations of uncertainty to sway events in the favour of a specific group, critical juncture analysis highlights the role that these actors play in the formation of institutions (Capoccia 2015, p.3).

The first identified juncture was the 1910 Power Act. Intuitively, one may have expected this to be shortly after the commissioning of the earliest municipal power stations. Johannesburg’s first power station came into service in 1891, and Kimberly and Cape Town as much as a decade earlier. The Act though is significant because of the legislative framework introduced, or the “rules of the game” it created (North 1990). Here the contents of the Act and its passing were motivated by the findings of the 1909 Power Companies Commission, set up in response to the concerns and perceived risks associated with the single supplier, VFPC. The commission identified the financial benefits of large-scale production, which it acceded could be financed by the private sector, but warned of the grave risks associated with a strategic commodity controlled by a monopoly. Distrust of the private sector and the advantage of entering Union with the(ir) regulation in place, motivated the Transvaal government to hastily pass the Act three days before amalgamation. Table 8-1 presents a historical analysis of events surrounding the Act

Table 8-1: Historical Analysis of the Power Act (1910)

Power Act Specifications	Intended Outcome (Based on Research Findings)	Actual Outcome
Creation of a power undertakings board to issue and regulate generation and transmission licenses	Oversee government policy and start regulating the ESI	Precursor to the Electricity Act (1922) which created the Electricity Control Board and Escom. The Act endured until 1995 (Marquard: 2004, 144)
Electricity tariffs to be regulated with surpluses redistributed to users – <i>neither at a profit or a loss</i>	Minimise operational costs for large users (mines, government and railways)	1. Rather than return profits, Escom builds new power stations (continuous build mindset) 2. Roots of cross subsidisation
Municipal undertakings can generate and transmit within area of jurisdiction – no license needed	1. Supply requirements of large users are prioritised over those of the municipalities 2. Residential market demand seen as negligible	1. Creates two non-competing ESI's (municipal and Escom) 2. Secures (inadvertently) a major revenue stream for municipalities 3. Large MEU's (1950-1969) threaten Escom business model
Private undertakings allowed, but subject to a license being issued	Barrier to entry to maintain government control of ESI	Excludes private sector involvement in ESI until 2010
MEU's may not supply large users (>25 kVA)	Security of demand and economies of scale for Escom	1. Eliminating competition introduces operational inefficiencies 2. Escom dominates and dictates ESI 3. Negatively affects MEU business model
Expropriation after 42 years	Ability to intervene in the event of negative outcomes of private sector ESI	Same as above

To ensure that the path dependency analysis is credible, it is necessary to confirm that the starting point, or critical juncture, is appropriate and that the sequencing and timing of events have been carefully considered (as detailed in Chapter 2.3.3 – *Self Reinforcing Sequences*); because it is at these critical junctures, where decisions taken affect outcomes over the long term, which complicate and frustrate future attempts to change direction or approach. For this, the theory tells us to determine whether the selection process had an element of contingency. Considering the available and plausible options at the time then allows for credible counterfactual analysis, which avoids random and hypothetical “what if” scenarios. On the first score, given the importance of the gold mining industry in Johannesburg at the time, and the influence it could wield, the decision to proceed as it did was not random, irrational or irresponsible. The Transvaal government was acting to protect the region’s economic interests and as part of its broader strategy to ensure that it would dominate the soon to be created Union of South Africa (Chapter 4.3). This event thus displays the two characteristics necessary to be classified as a critical juncture (Chapter 2.3.1), namely that it was possible for a different decision to have been taken, and secondly, that the options available were not infinite. But what were these, and was it the case that they could have been more plausible, even marginally so? Counterfactual analysis, based on the historic events, identifies two additional options. In the first, the Act is not passed before Union because consensus from the other three provinces is deemed necessary and appropriate, given that this event was just three days away. However, this option would have undoubtedly led to delays, and the extent to which the Transvaal lobby group would have been able to pass the Act in its original form, is difficult to assess. But (some) concessions and changes would have been a likely outcome; for example, being less influenced by large mining concerns, meaning lighter trading restrictions on MEU. For the second scenario we suppose that the authors of the Act are less wary of the private sector and more even-handed, creating a more competitive operational environment, and in so doing reduced future national over-reliance on Escom. With a path chosen, reinforcement and lock-in could now commence. Hoy, responsible for electrifying the railways, confirmed that although SARs had no interest in generating electricity to power its trains, it would not buy from private suppliers or MEU’s, as railways needed reliable power supply. This gave Kotze (who participated in the 1909 Power Companies Commission and authored the Power Act) and van der

Bijl (with his vision on how to industrialise the country), the leeway to push for additional concessions than those originally proposed by MM for the 1922 Power Act. A commission (Escom) would not oversee, but run, the country's ESI. The Act also ratified nationalisation. VFPC was on borrowed time and expropriated in 1948. From thereon, Escom could focus on eliminating MEU generation, which it did as we shall see in the next paragraph covering the second critical juncture. But at this point, the assertion made in Chapter 6.3.3 that these events were 'foundational', can be confirmed; where in line with Marquard's view (2004: 146) the objectives of the regulation institutionalised with the Act, were "*effectively preserved*" for 85 years (1910 – 1995). Indeed, except for new municipal generation, which was officially stopped in 1969, and limited private sector generation from 2012 under the REIPPPP, the two path dependent processes created by the Act remain in place in 2017. Firstly, that users<sup>142</sup> would be supplied by a nationally integrated utility (Escom); and secondly, the cross subsidisation of municipal functions from electricity sales, which did not apply to Escom. For the latter, the mining industry's ability to influence the Commission Report which led to the publication of the Bill (precursor to the Act), was key. As pointed out by Christie (Chapter 6.3.2) the mining industry wanted the lowest possible electricity tariff and did not want a situation to arise which would allow MEU's to charge mines higher rates for the relief of rates. Thus, the Power Act granted MEU's the automatic right to generate and distribute within their areas of jurisdiction but not to specific (mines, government and railways) or large (>25 kVA) users; and required private utilities to apply for a license to operate in a municipal area, which was unlikely to be granted – and indeed none of any significance was. The consequence, which endures to 2017, is that the practise of the cross-subsidisation of municipal functions through an indirect tax levied by municipalities on their consumers, which at times and over time is practised beyond its economic limits, is a practise not imposed on users taking their supply from Eskom.

One can thus conclude that the characteristic of path dependency is present, whereby the further that government progresses along a path, the greater the likelihood that other previously appropriate alternatives will not be considered, as has been the case. The combination of these events demonstrates conclusively that the Power Act was a critical juncture, and the starting point of path dependent ESI.

The second critical juncture is less clear cut. The research identified the 1969 Margate Convention, where Escom (supported by national government) and the AMEU (supported by the UME) squared off. In hindsight, it was little more than the AMEU negotiating the best settlement, with the decision to halt municipal generation already made. In return, Escom would not challenge municipal distribution rights, and borders would be extended in recognition of cities growing, but subject to an agreement reached between Escom and the municipality. Escom's concessions were minor if one considers that this informal agreement was contrary to the provisions of the 1910 Power Act, which guaranteed municipal generation and distribution rights. From hereon Escom would dominate all generation in the country. Thus, the agreement satisfies the third requirement of a critical juncture - where the outcome can reproduce itself to become dominant. Although necessary, this is not sufficient. For the event to be classified as contingent, it must be shown that Escom's domination of generation would not have occurred regardless, through transformational or adaptive change (Capoccia & Kelemen 2007).

Marquard's (2006, p.154) analysis found that during the 1950s and 1960s, Escom's ability to access international loans with relative ease, allowed it to: 1) Fund its expansion programme; and, 2) Integrate the separate electricity undertakings through the construction of a national grid, made possible by high-

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<sup>142</sup> Residential and small commercial users would be supplied by MEU's if they resided within the municipal jurisdiction

voltage transmission. The grid would unlock greater economies of scale, as much larger electricity plants could be built on the coal mines, eliminating transportation. Simultaneously, the Borckenhagen Committee weighed in by supporting Escom's preferential right to supply energy intensive industry, but more importantly, by asserting that it was Escom's role to meet the country's electricity requirements, while *"further municipal generation in areas which could be supplied by Escom should be discouraged"*. The combined effect of these events necessitated reform, which took the form of the Electricity Amendment Act of 1971. This sequence of events supports the supposition of transformational change.

However, although these events are not disputed, the research found that the situation was far more complex and that Eskom's ability to continually benefit from rent-seeking, (always having national government's tacit support), meant that it was able to influence outcomes. Firstly, Borckenhagen's report, which investigated the financial relations between the three tiers of government, and primarily municipal funding shortfalls, took 15 years to be released as a White Paper, and provided local government little financial relief and no new revenue sources (Chapter 7.4.1). The pronouncements it made on ESI sided heavily with Escom, and when the UME challenged these findings and recommendations, the Committee responded that MEU's were contacted but failed to make representation during the consultation period. The AMEU minutes tell a different story; one of cancelled and postponed meetings, and that when meetings were held, they were short, vague and questions posed were superficial. Mr Leishman went as far as accusing the Committee of not being truthful (see Chapter 7.4.2 – May 1958, October 1959, May 1960, May 1963 and May 1968). Secondly, during this period municipal generation hinged on the JEU application to construct the 1 000 MW Liefde-en-Vrede, which needed to commence before 1966 to ensure uninterrupted internal supply. Both the Provincial Administrator and Minister of Economic Affairs postponed and cancelled meetings, and when the meetings were held (always in the presence of Escom, a privilege not extended to them) they were short, off-topic and inconclusive. These delay tactics disrupted JEU planning, which they knew jeopardised the project. The JEU's application, to which Escom objected, was declined three times on the basis that the plant would not generate electricity at a cheaper rate than Escom. This was an incorrect interpretation of the regulations (conversion), because although true on paper<sup>143</sup>, the Liefde-en-Vrede plant would in fact generate at a cheaper rate than Escom could supply. This would translate to either a lower tariff for its consumers or greater surpluses, or both - clearly in everyone's interest, except Escom's. This is an important point, because the JEU plant which railed coal in and used sewerage for 80% of its water needs, (a benefit national government inexplicably appears to have chosen to ignore, even though government from 1956 stated that water would be a limiting factor to economic development (MacKay, 2003)), could still generate at a cost lower than the large Escom plants, which had no coal transportation costs and were operating at neither a profit nor a loss<sup>144</sup>. This begs the question, were Escom tariffs higher than they needed to be? Was this possibly to fund their expansion programme, which as already seen, has almost always been based on overly optimistic demand projections? Finally, in declining the application, the Administrator and Minister were contravening the Power Act (1910). The JEU had approached the Supreme Court and their lawyers were confident of a victory. It was behind the scenes political pressure, and the delays, which persuaded Leishman to drop the court action. By siding with Escom and choosing to ignore / overlook the merits of the application, government was, to some extent, irrational and one-sided; which then satisfies Mahoney (2000)

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<sup>143</sup> The distinction here is that different metrics were being applied, Escom pointed to the cost of generation and not the (higher) cost of supply, which from a JEU perspective was meaningless as it was charged the latter

<sup>144</sup> Until 1985 (under the 1922 and 1958 Electricity Acts), Escom's tariff structure was restricted by the principle that tariffs should set so that a) Escom made neither a profit nor a loss, and b) cross-subsidization between consumer classes was prohibited (Marquard 2006, p.142)



requirements for the decision taken at Margate to be classified as contingent. This is not to suggest that Escom would not have ultimately dominated the ESI, it would have, but had there been a competitive market, it may have taken longer and changed the dynamics of the ESI to the advantage of industry and the population. In conclusion, Escom was able to exert its influence to exploit a situation of uncertainty (Capoccia 2015), entrench its position and take control. Which it did. And its domination was such, that it then went on to either renege or partly honour many of the commitments made to the AMEU, which was powerless to hold it to account. Based on this trajectory, I argue that the Margate Convention was a critical juncture.

The third critical juncture is the 1996 Constitution, which recognised and elevated, local government to one of the three spheres of government; representing a fundamental shift away from the three-level hierarchical inter-governmental system in place since 1910, with municipal function under the authority of the provinces. To address inequalities of the past, the constitution introduced a wall-to-wall local government system by providing that municipalities “*be established for the whole of the territory of the Republic*”, and given the executive authority to provide specified services (listed in Part B of Schedule 4 and Part B of Schedule 5) in a sustainable manner, for which they are entitled to collect revenue - electricity reticulation being one. And it was this provision which was the death-knell of REDs. Municipalities, having sought legal opinion, knew that this was their trump card and that should the proposed EDI reform take a wrong turn, they could simply exit, which they did. We have seen how tense political negotiations between the ANC and the NP during the GNU, led to municipal functions enjoying constitutional protection. Official NP policy, through all of the 1980s, was for decentralized local government. Of course, this was in name only, as independent local government was just not possible while trying to maintain the apartheid system. Too many things could go wrong, and the country under the numerous “state of emergencies” had become highly centralized, with all decisions, big and small, having to go through PW Botha’s State Security Council. However, the NP negotiated fiercely for decentralised strong local government during the scripting of the final constitution under the GNU, as it was: 1) A means to protect (white) minority interests, knowing that they would lose the national elections; and, 2) A counter balance to potential abuses by national government. Conversely, the ANC was pushing for highly centralised government, which it believed was more likely to ensure the redistribution of wealth and the reversal of apartheid inequities. Mainstream international thinking at the time was for decentralised government (World Bank, the IMF, USAID, other agencies and many academics) - viewed as a means to entrench democracy and strengthen accountability. Identifying benefits for itself once its political position was secured after the democratic elections, the ANC yielded (see Chapter 4.5.2) and local government was elevated to a sphere of government. This outcome was never certain. If anything, with the ANC winning an outright majority, it could have dictated terms and insisted on a highly centralised structure during the short period of the GNU, had the balance of power within its constituency been slightly stronger.

The challenge of decentralised local government, as the literature states, is that its autonomy can be more easily compromised if most of its funding is sourced from national government. Independent revenue sources, which the constitution provided, mitigate against this risk; but here we enter into the realm of tax theory, because national governments are not in favour of duplicate and competing taxes being levied by local government, such as personal or company income tax, GST and VAT, and thus limit the options. The constitution addressed this issue by disallowing local government from imposing income tax, VAT, GST or customs duty, but granted it the sole right to levy rates on property and surcharges on fees for

services. In essence, the constitution formalised the existing and entrenched (sticky) path dependent practises going back to 1910, and further strengthened them by elevating local government to an equal and autonomous sphere. No longer could a provincial administrator issue non-negotiable instructions. Municipalities were still however expected to: be self-sufficient; deliver the functions that they always had; and, access the same revenue sources. How this approach would resolve the decades-old dilemma dating back to the 1950s, of municipalities simply being over-burdened, under-funded and under-capacitated, is anybody's guess. This is especially true if the political changes of having to deliver services to previously unserved areas, the establishment of new municipalities and their transformation, are also considered. These factors had huge implications for municipalities, not least of all Johannesburg, which almost went bankrupt in the late 1990s, as the case study has shown.

Ultimately, the writing of a new constitution presented a window of opportunity where change was possible – providing the impetus for a reactive sequence that could have been employed to effect a reversal of events and ensure a new path – or was it another critical juncture point, due to the complex and competing priorities faced by all political actors in the three spheres of government, Eskom and the MEU's, at this watershed moment in the country's history (as detailed Chapter 7.6.4) - leading to further institutional lock-in? Table 8-2 shows why it is the latter.

Table 8-2: Counterfactual Analysis of Electricity Distribution as a Constitutional Mandate (2006)

Requirement	✓ / ✗	Motivation
Time sequence of events	✓	Events have been clearly traced and reliable
Other available and viable options	✓	Several options were available. The one chosen was contingent, initial expectations were that the ANC would opt for highly centralised government
Does event capitalise on initial advantage	✓	Electricity surpluses are a primary municipal revenue source. When this was challenged by the RED's reform, the constitutional prescript ended the programme
Positive reinforcement	✓	Having demonstrated constitutional cover, attempts by national government to reform the sector are on municipal terms, resulting in a deadlock
Is the situation exploited	✓	Electricity surpluses have become the balancing figure for many municipal budgets. Capital investment on infrastructure is reduced to cross-subsidise other functions

Having identified the three critical junctures that elaborate on how municipal ESI was formed and then endured for over a century, it is worth testing this against the theory. Historical institutionalists (as explained in Chapter 2.3.3) recognise that events occur continuously; yet some matter and result in path dependency, while others do not. Why though? Here, due to the influence exerted by economics, the tendency has been to evaluate events through a utilitarian explanation of efficiency. Mahoney (2000) however suggests that this should be expanded to include the sociological frameworks of "Functional, Power and Legitimation" (Table 2-1). Such an analysis not only provides different insights but becomes crucial if the most appropriate mechanism to reverse lock-in is being sought. Indeed, these additional frameworks have proved useful to the research, which has found that the practise of relief of rates, also known as cross-subsidisation, satisfies all the criteria of the functional typology. Indeed, while the other three typologies may contain similar individual elements, such as mechanisms of change or reproduction, or institutional characteristics, "functional" is the closest explanation that appears to fulfil all three criteria. The points below, summarise the functional typology in Table 2-1 – and each of the three features (bold) are listed and outlined. An explanation as to why the functional typology has been satisfied, is then provided:

1. **Mechanism of Reproduction:** An institution is reproduced because it serves a function for an overall system: Yes, surcharges on electricity tariffs are an indirect tax, but not readily recognised as such by users, making them more palatable.
2. **Potential Characteristics of Institutions:** Institution may be less functional than previously available alternatives: Yes, higher electricity tariffs have had the following effects over the long term: losing commercial consumers to Eskom supplied areas; users reducing their consumption or switching to other sources; a regressive tax; a negative impact on local competitiveness; and an over exploitation of cross-subsidisation, used to fund non-electricity services and other expenditure items such as wages – leading to system neglect as capital investments are delayed, reduced or (generally) both.
3. **Mechanism of Change:** Exogenous shock that transforms system needs: Yes, the current system is so entrenched that national government's attempt at transformational change (REDs) failed. However, first signs of exogenous forces starting to challenge the status quo have begun to appear, as per the JEU case study.

Research Question 2: The extent to which national and local government's inability to find a political solution in the RED's reform process was due to underestimating broader dynamics and the entrenched status quo

Question 1 has shown that the transition to a democratically elected government created a juncture point for change. Thus, determining the reasons for failure necessitates an analysis of the sequence of events pre and post the juncture point (Mahoney 2000).

Government, after the GNU ended in February 1997, was under significant pressure to uplift the lives of millions. Spearheaded by the recently adopted constitution, delivery was to be achieved through broad policy frameworks, targeted strategies, legislation and action plans. The combination of urgency, newly appointed politicians with varying levels of skills, competence and experience, and the enormity of the task, compounded the inevitable and unavoidable unintended consequences and knock-on effects that every government experience. Calling for a *"balance between independence and cooperation"* to achieve the objectives of developmental local government, the 1998 White Paper on Local Government aligned with the constitution. Municipal capital projects would be funded from three sources, namely: grants from the consolidated municipal infrastructure programme, internal cross-subsidisation, and private sector involvement. Regarding electricity, the Paper recognised the revenue contribution made, but likewise the need for reform. It did not want to pre-empt ESI reform outcomes, as it recognised that the DME was still formulating the policy, but suggested that a local electricity tax could be implemented to offset revenue losses. The Paper was praised for recognising and taking responsibility for its service delivery obligations, which it did not take lightly; nor under-estimating the task. It was however heavily criticised for failing to recognise the state of crisis of local government, and on that score, all its good intentions became an elusive wish list.

At national level, economic policy started with the RDP, shifted to GEAR and then ASGISA – with each move taking it ever-further away from the long-held ANC's left of centre ideology. President Mbeki spoke of creating a competitive economy - explicitly emphasising fiscal austerity, deficit reduction, and pegging taxation and expenditure as fixed proportions of GDP.

Overall, electricity policy reform was developed through various government forums and committees, most notably NELF, EWG, EDIRC and ERIC; and post-1994 realities meant that reform would be a

compromise between economic efficiency and socio-economic upliftment. The former identified the urgent need for EDI restructuring; recognising that to create a competitive ESI, generation, transmission and distribution had to be separated; with an emphasis on cost reflective tariffs. Social upliftment imperatives then recognised that electrification had to be funded through cross-subsidisation, as new connections were to low consumption customers. To address the cross-subsidisation dilemma, the additional cost needed to be made transparent (shown as a tax). These recommendations were submitted to cabinet and in 1997 cabinet approved the consolidation of the EDI into the maximum number of financially viable and independent REDs. The Energy White Paper was released soon after (1998) and called for reform of the sector. Consultants were promptly hired to work out the details and in 2003 set up EDI Holdings for the sole purpose of restructuring the EDI. Chapter 7.5.5 explains how fraught this process became, resorting to drift to effect change, and the extent to which national government never fully grasped the *stickiness* of the situation – with electricity distribution at the core of municipal government. A post-mortem article on the demise of EDI Holdings issued by its CEO (De Beer & Waters 2011) shows that it was only in 2009 that the penny finally dropped *“Two years have passed since it became evident that any meaningful progress in restructuring the EDI was unlikely without a constitutional change”*. Local government, with the backing of the constitution, was never going to just roll over if it felt that once again it was being marginalised.

The window of opportunity for a reactive sequence (to transform or even reverse previous events) existed after the first democratic elections, when theoretically anything was possible. However, change was never going to be straightforward, as operational practises were on a well-established and entrenched negative feedback loop, wherein municipalities had to maintain the status quo to fund service delivery. Reform of the EDI would have required detailed assessment of dynamics perpetuating lock-in, and the development of a politically and economically acceptable alternative. What occurred, and unintentionally because of the complexity of the situation, was a national government policy approach that appeared contradictory and seemingly at cross-purposes. As such, it had little hope of derailing the entrenched path dependent practise of the relief of rates. On the one hand, national government spoke of transformational and developmental local government's provision, in most instances, of loss-making services to the previously unserved population, funded through a combination of national grants and cross-subsidisation. On the other, it touted reform. Cross subsidisation of course had been a loyal servant for over a century; and this practise was possible, and indeed necessary given the context, if it was not overdone - which unfortunately it was, for two reasons, with one a consequence of the other. The first is that the principle of municipal financial self-sufficiency, albeit not as stringently enforced, remained the overall objective; as the recently concluded constitution, pursuing decentralization, escalated local government to one of the three spheres, allocating its roles, responsibilities, functions and revenue sources – of which surpluses from municipal operations were sanctioned and exclusive. Secondly, the demands on electricity surpluses to fund municipal functions were steadily and consistently increased by the combination of stalled national growth policies and the decline of local government competence. These two events led to the institutional reproduction and acceleration of the relief of rates policy in the post-democratic institutional arrangements. Astoundingly, through all of this, national government was still commissioning electricity workshops and endorsing reform ideals, such as cost-reflective tariffs, consolidation and efficiency.

This convoluted policy context explains why the EDI restructuring programme, which consisted of 897 projects, staffed by competent and dedicated individuals, stood little chance. It may have been that although national government realised that a constitutional change was needed, forcing a change so soon

after adoption would have raised concerns about the ANC's sincerity and would have faced massive external and internal opposition. Indeed, the 17th Constitutional Amendment Bill to effect this change was tabled in 2009 but withdrawn in 2011. Without a new and quantifiable revenue source - not just vague notions of profit-sharing with national government, which would hold the "golden share" and thus exercise control - municipalities were not going to give up their crown jewel.

Ultimately, the primary issues which ESI reforms aimed to address i.e. a single generator (lack of competition), making MEU's viable and functional, improved service delivery, and cost reflective tariffs, are in 2017 largely in the same state as when raised as problematic in the 1990s. Of course, the root causes of needing to address these issues, have not subsided, let alone disappeared. Indeed, as expected, they have become more urgent and perhaps a major contributory factor to the state of the EDI specifically and the ESI generally. Here it is not possible to speculate on what could have been; but certainly, the proposed reforms were carefully considered responses to looming problems. Key amongst these is the appropriateness and sustainability of a hidden tax, or 'cross subsidisation', as a major financial contributor to local government service delivery and by extension the legitimacy of national government. In the short term and under a scenario of flat or declining electricity tariffs, as was the case in the late 1990s until 2005 (Chapter 6.6.2), perhaps it was. Certainly not once the large increases commenced from 2006, which added to the other contributory factors creating the death spiral (Chapter 7.6.2).

In conclusion, given the complexity of the issues at the time - a young democracy and new government, uncertainty on how to approach and execute reform, the pressing need for service delivery, and the speed at which things were unfolding in the country at the time, EDI reform is tantamount to policy failure. The opportunity for reform was present but lost during implementation due to muddled and uncoordinated policy.

## 8.4 Assessment of Objective 2

Having addressed the research questions, we can now consider whether it was necessary, and indeed beneficial, for the research to have been this broad and detailed. Are the complexities of the two diametrically opposed objectives such that it necessitated a review and understanding of the evolution of the three tiers of government, the political economy of the country and Eskom, before the primary research topic could be tackled? I would maintain that it was; and for two reasons: 1) The inordinate role of centralised government, which wanted little to do with local government; and 2) The extraordinary role that electricity plays in the economy. This is clearly demonstrated by the outcomes of the advent of democracy, which had the potential to change any and all policy, but did not do so to the extent that one may have expected. As per Nattrass and Seekings (2015) *"The ANC simply adopted existing government policy and deracialised them resulting in limited transformation and reform."* Thus, path dependent processes endured; and on this basis alone one must go beyond 1994 to understand the genesis and reasons for stickiness - certainly for municipal ESI.

In its attempt to reduce the tax burden on property owners, local government made a crucial conceptual turn from the moment it first started selling electricity (as was its practise with most services it provided). Of course, the massive extent of revenue contribution to municipal finances from electrical generation and distribution was not, and in truth could not have been, forecast when electricity rights and privileges were granted to municipalities by the 1910 Power Act. Understandably, as soon as the true potential was recognised however, local government officials latched on to it and took every step necessary to retain

their exclusive rights. Inherited from the British, the practise of relief of rates grew into the monster its naysayers predicted in the 1930s – warnings coming not only from the AMEU, but academics (Chapter 7.4.1) and the findings of a commission of inquiry (Chapter 7.3.1), which concluded similarly from the *“point of view of the users of electricity, and uneconomic from the point of view of industrial and general development of the city.”* At the time it was estimated that to fund other municipal functions, electricity was 14.5% more expensive than it needed to be, becoming a massive drag for an energy intensive economy; with three direct outcomes – being less competitive, encouraging business to take their supply from Escom and becoming disproportionately inequitable for residential consumers. In the words of Councillor James (1938) *“All ratepayers are not necessarily electricity consumers, but all electricity consumers are ratepayers, either as owners of property or through the rent that they pay.”* The temptation of ‘easy’ revenue led to over-reliance, to the extent that in certain instances the amount taken exceeded gross profit. As operations fluctuate from year to year, the relief of rates should only be possible when there is a surplus – and a true one at that – after allowing for redemption, interest on loans and most importantly, depreciation and obsolescence of plant and equipment; often overlooked or subject to variation on opinion for capital expenditure. An overreliance on this revenue source is likely to create municipal funding problems if electricity sales or profits drop. Additionally, using electricity surpluses to fund unprofitable or risky municipal enterprises, discourages the enterprise itself from maximising its returns. This was the case in the 1930s and remains the case in 2017.

The real issue always, was the relationship between central and local government. National government was constantly engaged in a balancing act between the perceived need of a self-sufficient local government (a British inheritance), the lack of sustainable means of independent revenue generation by the aforesaid local government, (especially given the practises inherited from Britain re local voting) and the need for a state owned utility which government would use as the foundation of its industrialization policy – triggered by a contingent event in 1910, whose key tenets through various historical processes of reinforcement, remains with us today. (Ironically, the underlying motive of the 1910 Power Act which was to address concerns about *“a powerful monopoly”* (VFPC), was ultimately what it worsened.) This meant that the three actors were always in conflict. Over the years, municipalities had been required to undertake additional functions, which they did not believe was their responsibility and received no additional income. Being so hard pressed for money, the municipal treasury was often forced to act in the way it did. What options did local government really have? It is true that landowners were protected, as an indirect tax was easier to collect than a direct one, and paid by a bigger base, reducing the burden on landowners. Concurrently and continuously, national government did not pay heed and would have little to do with local governments - piling them with additional functions. This led to several commissions of inquiry into municipal finances, Randall (1930s), Borckenhagen (1950s and 1960s), Browne and Croeser (1970s and 1980s), and all were unsympathetic to local government’s plea for additional funding, instructing them to be more efficient, while ratifying the practise of relief of rates in the 1971 White Paper and re-affirming this in the 1996 Constitution.

Ultimately, Eskom benefited through all of this, because national government was developing its industrialization strategy centred around this vertically integrated utility. For example, it is not inconceivable that one of the albeit lesser drivers of national government’s plan from 1960 to offer financial support for industry to create jobs in the homelands (and out of white areas), had the added benefit of creating new demand for Escom at the expense of the MEU’s. Therefore, over a 120-year period, a complex relationship developed between MEU’s (the proverbial local government cash cow), national ESI, the economy, and the three spheres (tiers pre-1994) of government. Thus entrenched, and eventually

protected by the new constitution, any attempt to introduce change (reform) to municipal and national ESI is unlikely to succeed unless the knock-on effects to the entire system are considered and addressed.

Has anything changed? Christie (1984:35) confirms that municipalities were practising the relief of rates in 1907 – effectively from when they first started generating and distributing electricity. Indeed, concerns of this being extended to the mining industry, formed the reason that Rand Mines vetoed the proposal of Johannesburg municipality supplying the entire city. The research identified two critical junctures (Question 1) when, according to the theory, the window for change was most ajar but did not occur. These two points in time were by no means the only instances when the practise was challenged or could have been challenged and meaningfully addressed. There were several others *inter alia*: International trends in the 1930s and 1940s which initially placed a cap on the transfer of surpluses and then ended them altogether, which were disregarded here; high and often bi-annual Escom tariff increases on very short notice in the 1970s; direct competition from Eskom in the 1980s which serviced adjacent areas, most notably Sandton; Johannesburg's bold, but futile, decision in 1992 to reduce residential electricity tariffs by 10% and limit the increase on business tariffs to 5%, which backfired - resulting in a 25% increase the following year (Figure 7.3); and five double digit tariff increases by Eskom from 2008, putting the entire municipal funding arrangement under pressure. Throughout all of these opportunity junctures, nothing has yet changed.

## 8.5 Assessing the Usefulness of Historical Institutionalism as a Theoretical Framework

This research does not seek to engage in theory building - limiting its academic contribution to an in-depth analysis of the municipal ESI, which provides new content and insight. Having said this, it is worth reflecting on my experiences with the selected framework, and in so doing, deliver on the second part of the first research objective. Such critique is also likely to be useful to future researchers, if my recent interactions with many students and academics is considered. They, as was I, were attracted to institutionalism, but often found the approach, especially the historical, to be opaque, lengthy, subjective and unwieldy; leaving many to echo the words of Thelen and Steinmo "*the institutions explain everything until they explain nothing*" (Chapter 2.4) - notions I grappled with regularly.

National government abandoning the reform of EDI after 10 years of effort, demonstrates that it was unable to unlock the institutional interconnections existing between itself and local government. Thus, by going deeper and wider, the research aims to provide a more nuanced understanding of the path dependent trajectory that has developed over many decades. Historical institutionalism was deemed appropriate, as it offers a lens to trace the institutional and economic evolution of municipal ESI within the context of the country's three economic pillars – mineral resources, cheap energy and cheap labour. The strong linkages between the pillars meant that all three had to be considered.

The concept of path dependence and critical junctures is relatively straightforward, widely understood and accepted. There is thus no benefit in interrogating or espousing on its usefulness for this research, as it has been adequately demonstrated in the answer to research question one. What is more complicated and less understood, is the process of incremental change during long periods of stasis. The approach adopted for this research follows, with contributions from others, Mahoney and Thelen's advancement of the framework, with their typology to account for modes of change and change actors given political contexts – as detailed in Chapter 2.4.3. And the application thereof provides a first-hand account of its

usefulness based on my experience. Here I am not alone: *“The value of Mahoney and Thelen’s approach is that it provides testable hypotheses about how the nature of context and actor discretion relate to types of change, and it provides a potentially valuable framework for a more fine-grained understanding of the change process within energy transitions”* Lockwood (2016).

The research identified three critical junctures, all of which deepened the path dependent practise of the relief of rates, rather than having the opposite effect of providing an opportunity for reversal or termination. Indeed, exogenous shocks (in this case the 1994 democratic elections) often promise more than they deliver. Certainly, they can contribute, or even hasten, institutional change or not. The research has identified both. Albeit that the second critical juncture (Margate agreement) occurred at a specific place and date, detailed historical tracing has shown that it was not an exogenous shock. Rather it was the outcome of an ongoing process of Escom undermining the MEU’s and Johannesburg, as explained in Chapter 6.5.3, and identified through the typology as displacement (change type), with insurrectionaries as change agents. Applied to the typology, the historical events are congruent with the theory.

In assessing whether institutional change occurred, the level of historical detail has generally allowed for a straightforward identification of the change type. Where this has not been possible Mahoney’s and Thelen’s typology has deciphered ‘grey areas’ providing clarity and certainty. By way of example, it is posited in Chapter 6.4.3 that the Electricity Act (1922) reinforced the 1910 Power Act through the process of layering – but it is also plausible to categorise this change as an outcome of drift or conversion. The application of the typology, which simultaneously evaluates the type and agents of change points identifies it as layering through a process of elimination, as detailed in that chapter section. Having demonstrated that overall I have had a positive experience in the application of the framework, it is useful to impart my experiences and insights:

- The research topic I chose had various aspects to it, and the use of a multiple framework approach thus allowed me to work separately on these distinct aspects of the research problem;
- As has been explained above, it is easy to get caught up in the drama of punctuated equilibrium and exogenous shocks to the system that force actors into new paths. However, this is seldom the case, and where punctuated equilibrium does occur, it is not as sudden as it may seem. It is the culmination of a series of events which have led to a decision or action point, which then marks a point in time – as expounded upon in Chapter 2.3.3 under Punctuated Equilibrium. It is the careful and accurate tracing of the behind the scenes events, or as per North the “period of friction”, which add value and understanding to the research;
- Historical institutionalism is empirically demanding and can be difficult to apply. Limited research sources and findings do allow you to draw conclusions, but ultimately these cannot be substantiated or defended. Similarly, shortcuts will also lead to facile judgements which are easily exposed;
- Linked to the previous point, a failure to present facts in their order and with the level of weight they carried at the time, means outcomes can be misunderstood, misinterpreted or misused. This can have negative consequences for the theoretical approach due to misapplication, but more importantly, may lead to long-term negative outcomes if acted upon;
- The research amply demonstrates that from its genesis, the major decision points that have, and continue to, shape South Africa’s ESI (and consequently EDI) are politically driven; with economic and technical factors as secondary considerations. Here, prominent, but not isolated, examples include: municipal councillors institutionalising the relief of rates policy in the 1930’s; the Provincial Administrator’s refusal to approve the construction of the Liefde-en-Vrede power plant in the 1960’s;



and the decision under democracy, to continue to cross-subsidise municipal income from electricity by bundling it into the tariff as a hidden tax, rather than transparently reflecting it as such. These, and many other instances, therefore underline the appropriateness of the historical institutionalism described by Steinmo (2008, 151) as “*an approach to studying politics.*”

- The framework has validated that analysis which concentrates on long-term conditions and gradual change, the *long durée*, is able to reveal and provide clear explanations as to why policy fails and the consequences thereof. It is my experience and belief that this research approach has provided insights that other methods may well not have. However, this can only be conclusively validated through the application of additional comparative research approaches, and perhaps a topic for future researchers; and,
- The research has also benefitted greatly from the significant evolution that historical institutionalism has undergone from the late 1980’s. For example, incremental change would have been difficult to manage in this research under the framework’s earlier guidelines and approach; with the ongoing refinements to the framework, improving its usefulness, accessibility and applicability. This is also clearly evident through the growing number of theses over the last few years that have successfully anchored their research in historical institutionalism - which perhaps with poetic irony, itself has evolved in a process of incremental change. It is my hope that this study will make a similar contribution.

Thus, we return to the core tenet of the chosen theoretical framework – History Matters. Certainly, we have seen that it does. The use of the historical institutionalism framework does however require detailed and reliable research sources, such as the ones I was fortunate to unearth; and under these circumstances it is a rewarding and worthwhile endeavour.

## 8.6 Final Thoughts & Additional Research Findings

With so much of this research pointing to the currently entrenched system’s resilience and ability to endure, an important question is whether the odds are then not heavily stacked in favour of continued path dependence? I would answer, possibly not. Table 8-3: illustrates how the relief of rates (cross subsidisation) has progressively evolved into a cumulative crisis since it was first flagged. In the table, concerns raised by the AMEU at the 1936 conference (and one subsequent factor identified in the research) are listed in the first column. The status of each is then rated at three key points in time, the two identified critical junctures and the present day (2017). Referenced research findings (in brackets) then justify the allocated rating where necessary – with the three rankings, or metrics, applied being ‘limited, moderate and critical’. Here, the objective is not to provide a financial quantification of the impact of cross-subsidisation on the economy, nor does this analysis mean to imply that electricity tariffs are higher solely, or even largely, as a result of cross subsidisation – electricity tariffs increases have, and specifically from 1969, almost exclusively been the sole preserve of Eskom. Indeed, a 2015 analysis that compared tariffs, found municipal tariffs in several categories to be cheaper than Eskom’s<sup>145</sup>.

The table’s objectives are thus twofold. The research has demonstrated how the relief of rates was inherited from the British system and retained even when Britain, along with New Zealand and New York

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<sup>145</sup> Yelland, C. (2015) Domestic electricity prices of six metros and Eskom compared <http://www.ee.co.za/article/domestic-electricity-prices-five-metros-eskom-compared.html>

City amongst others, discarded (indeed outlawed the practise) in the 1930s. Locally, at this time however, with Escom's sole focus on servicing the mining industry, the practise was serving local government funding requirements well, becoming ever more entrenched as residential demand grew. These increasing returns naturally led to *stickiness* and the amplification of a positive feedback loop, despite credible economic theory to the contrary, which remains in place in 2017. Thus, the first objective is to ascertain how the context has changed. In other words, why concerns identified in the mid-1930s only appear to be threatening the entire system some 80 years later? Is it that it was a necessary requirement for all of them to manifest? Here, it then also becomes particularly significant to rate the indicators at other historical points to understand the variations in the ranking results. Thus, when one examines the table, the complete dominance of the 'critical' ranking in 2017, suggests a tipping point, where a new critical juncture opens the door to change, may be imminent. Not as an exogenous shock but rather a culmination of events of an ongoing process. If handled correctly, meaningful and long overdue reform can occur; and this suggests that the probability of change may significantly advance within the next five years - not by design - but the combination of: 1) Deterioration in municipal finance – made up of corruption, incompetence, a weak economy, and cross subsidisation reaching its economic limits; and 2) Infrastructure and service delivery revolts, which may force change through protest action by lower income consumers and reduced consumption by the MEU's core profitable consumers, who through technological advances (Arthur, 1989), now have viable and cost-effective alternate options. Indeed, the historical institutionalist framework adopted, has demonstrated this potential, by identifying the competing vested interests of actors and the economic and social response to cross subsidisation in the form of a hidden tax. When, if and how such potential manifests, and what its results will be, offers interesting scenarios for future researchers to engage with. Simultaneously, the second objective of this analysis is to highlight key findings of the research, which are detailed in the last column.

Table 8-3: Impact of Relief of Rates (1936 – 2017)

Concerns with Relief of Rates	1936	1970	1996/98	2017	Research Findings
<b>1936</b>					
Inflated tariffs raise the likelihood of loss of revenue through reduced sales / fuel switching	Limited – ESI in growth phase. Supply shortages as national grid and large Eskom plants still under construction (Ch 5.4.2)	Limited – South Africa’s economically most prosperous decade (Ch 5.5.1)	Moderate – Excess supply leads to tariff decreases (real terms), still unaffordable for many (Ch 5.6.2)	Critical – 300% plus increase in tariffs 2008 to 2013 (Fig 5.8)	Theory (Ch 2.4.2) warns that business & residents evade or relocate to municipalities with lower costs. The research found JEU higher electricity costs contributed (not primarily but not insignificantly) to the early 1990s migration to Sandton and from 2000 to high non-technical losses (Ch 6.4)
High tariffs ignore the needs of poor & large households (regressive tax) <sup>146</sup>	Moderate – Poor white problem (Ch 5.3.1)	Limited (Ch 5.5.1)	Critical – Addressed through national policy (Ch 3.6.3)	Critical – Relief provided through FBE, but insufficient in a context of high unemployment, inequality & low economic growth (Ch 3.6.5)	The research has found that nationally, & specifically in Johannesburg (as per the case study), the high levels of non-payment are a combination of an inability to pay & protest at the inadequate service delivery levels
Compromises prudent accounting practises (depreciation, redemption) leading to deterioration of system as surpluses are prioritised for relief of rates	Limited – Infrastructure relatively new. AMEU concerned about the future (Ch 6.3.1)	Moderate – Networks & generation plant ageing. Increased demands on local government (Ch 6.4.2)	Critical – Service delivery to previously unserved BLA’s funded largely through cross-subsidisation (Ch 5.6.2; 6.5.6)	Critical – Same as 1996 (Ch 5.6.2; 6.5.6)	Table 6-15 demonstrates the extent to which City Power’s performance is deficient in meeting the NERSA performance guidelines
Transfer of surpluses leads to little or no reserves, requiring MEU’s to take loans to finance new equipment and operations, adding interest costs and necessitating more tariff increases	Moderate – As per AMEU minutes (Ch 6.3.1)	Moderate – No evidence found to suggest otherwise. Municipal tariffs were increased in line with Eskom	Critical – Case by case basis. Johannesburg on the verge of bankruptcy diverted all surplus revenue to the municipal cause (Ch 6.6.1)	Critical – MEU underinvesting by as much R2.5 billion per annum (Ch 6.5.4)	Although financial statements were not scrutinized to determine if this was indeed the case, the research did confirm that large surpluses are being transferred to subsidise other municipal functions at the expense of capital investment
Electricity provision must be efficient (cost reflective rates and without subsidy) to stimulate the economy	Moderate – Tariffs 14.5% higher to fund relief of rates (Ch 6.3)	Moderate	Critical – New users are low users, with most unable to afford costs (Ch 6.5.6)	Critical – High tariffs have led to theft & delinquent accounts (Ch 6.5.6)	The relief of rates has aided the false economy under which Eskom operates (expanded upon in the closing paragraphs below)
Doubtful practise - surpluses vary annually, an overreliance may lead to funding problems if sales / surplus decrease	Moderate – WLA in growth phase (Ch 5.5.1)	Moderate – WLA about to enter into economic decline phase (Ch 6.4.1)	Moderate – Eskom over supply keeps system in balance, but warning signs present (Ch 6.5.5)	Critical – High tariffs & losses have led to large surplus reductions (Ch 6.6.2)	The research has confirmed that this has materialised since ~2010. Raised individually by municipalities & through SALGA, gaining in momentum – primary topic at CIGFARO 2017 conference (Ch 4.2.2)
Technological advances may lead to consumers switching to other energy sources, especially if tariffs are too high	Limited – New electrical equipment & limited alternatives	Limited - New electrical equipment & limited alternatives	Limited – Electrification & reduced electricity tariffs fuelled demand	Critical – High tariffs, technological alternatives & climate change now driving demand down (Ch 6.6.2)	Concerns with regards to the death spiral are not limited to Eskom (Ch 6.6.2). Conversely, consumers who cannot afford the tariffs are reverting to unsafe energy forms or theft, undermining the national electrification project

<sup>146</sup> BLA’s were excluded under apartheid. Once absorbed in 1994 the real situation is reflected

Some municipal functions are unprofitable by their nature; thus cross-subsidisation is necessary - swings and roundabouts	True – Thus proposal to place a cap on transfers & levy a direct tax		Address apartheid inequities, but do so in a transparent manner viz direct tax (Ch 5.6.2; 6.5.6)	Critical - Increase national contribution &/or introduce new municipal revenue sources (Ch 4.2.2)	Central theme of this research, with findings that support it, is that local government has been allocated insufficient & inappropriate (cross subsidisation) own revenue sources to fund developmental government, undermining the legitimacy of government
<b>Post 1936</b>					
Corruption &/or reduced competency of local government, leading to budget shortfalls	No evidence found to suggest that this existed	Moderate - No evidence of widespread corruption. Purging of municipal staff to make way for Afrikaans speakers, had affected service, leading to calls for a commission of inquiry into municipal incompetence (Ch 3.4.3)	Critical – Employment equity at government level leads to loss of experienced staff, often replaced by inexperienced political appointees. Corruption on the rise since early 1990s (Ch 5.6 & 6.6.1)	Critical – As per Auditor General & National Treasury findings, manifested by correlation between technical failure & alignment with political factions (Ch 3.6.5)	As per 2017 comment

Ultimately, while musing on the research findings and the implications thereof for local government, its MEU's and its finances however, it is worth taking some time to reflect on the elephant in the room; Eskom. Before doing so, it would be unfair and unkind to overlook the efforts and achievements of the countless dedicated employees who over the past 90 years committed themselves to building a world-class utility, the fourth largest at one point, which continues to power the economy. The utility however has enjoyed a charmed life, which may very well be coming to its teleological end; facing the same 'death spiral' challenges that all large utilities around the world are grappling with. Eskom's situation though, is perhaps more extreme. Here, the majority of the country's minerals, the 'wasting asset', have been extracted – ore yields are declining, mining depths increasing, and in a prolonged cycle of depressed commodity prices, many mines are closing or contracting – the US\$ price of gold for example has decreased by 10% for the period 2012 to 2017. It would be alarmist and overstating matters to believe that mining activity is nearing the end of the road, it is not, but it has declined, and this can be seen by the electricity demand - volumes in 2017/18 were at the same level to those in 2007; but of greater concern (and here take your pick between actual outcome or DoE margin of error) *"For the financial year ending March 2018, the actual total electricity consumed is about 30% less than what was projected in the Integrated Resource Plan of 2010"*<sup>147</sup> (Minister of Energy – Jeff Radebe). Thus, the economy has started to transition to a significantly less energy intensive service economy, which profoundly changes the Eskom modus operandi and necessitates realism and an ability to adapt its business model to ensure its survival. Indeed, Jaglin (2016) predicts its demise within a five-year period - at the very least in its current structure.

On reflecting somewhat deeper into what is present-day Eskom, I can't help but conclude that the special place that Eskom held in government's decision making, both pre and post 1994, created a false economy for the utility, which has finally caught up with it. Several instances of this, drawn from the research, are detailed to illustrate the point. Firstly, the Johannesburg case study has shown that the JEU was a well-operated utility which was a net seller of electricity to Eskom in the 1950s. This provided the municipality with an additional source of revenue which it used to reduce the impact that cross subsidisation placed on its tariffs. In the 1960s when Eskom's new plants had been commissioned and its purchases from the JEU started to decline, the JEU responded by keeping its generation costs below Eskom's, and when they were not, it took supply from the national utility to ensure that its tariffs were competitive, and surpluses maximised. Although not ideal from Eskom's perspective, it was sheltered from the full effect of competitive forces by the Power Act, which disallowed MEU's from selling to large users and outside their area of jurisdiction, with the result that the JEU was not able to maximise returns on cost advantages. The only outlet for any generation surpluses was Eskom, who paid a lower tariff than what large users would and only if it needed supply. If this was not enough, Eskom conspired and succeeded in ending municipal generation in 1969, in flagrant disregard of the provisions of the Power Act (1910). Incensed, the JEU took the matter to the highest court to challenge the provincial administrator's refusal to approve the application, but political pressure from senior levels in national government (as it was widely expected that the court would rule in the JEU's favour) saw them withdraw the case just days prior the court hearing. Secondly, both Eskom and Eskom enjoyed privileges that other state-owned enterprises did not (Chapter 5.5.2: Phase II Horwitz 1994: p 11). This manifested in different forms. With regards funding, anything was possible - from the conventional (local and international loans, pre and post 1994), to the creative (Capital Development Fund in the early in the 1970s) to the blunt (large tariff increases on short notice to fund shortfalls and inefficiencies - again pre and post 1994 - and most recently with the new

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<sup>147</sup>According to the DoE website *"The Integrated Resource Plan in the South African context is not the Energy Plan - it is a National Electricity Plan. It is not a short or medium-term operational plan but a plan that directs the expansion of the electricity supply over the given period. Its purpose is the identification of the requisite investments in the electricity sector that maximize the national interest"* <http://www.energy.gov.za/IRP/overview.html>

build programme of Medupi and Kusile). Turning to demand projections, which underpinned Eskom's new build programme; these were overly optimistic in the 1960s and 1970s and more recently from 2005, while in both instances the basis of the projections was questionable and actual demand failed to match the forecast, thus resulting in large long-term surpluses and debt. Then there is Eskom's ability to veer national government stances to its benefit, but almost always to the detriment of the national economy. Here, we can consider its influence on the Borckenhagen inquiry, or stacking the newly formed NER in the mid-1990s with Eskom retirees (led by its former CEO), or being able to convince the DoE to get the ISMO "*off the DoE's table*", to name but a few. These examples suggest that the short periods during which South Africa has amongst the cheapest electricity tariffs in the world, come at a larger cost over the long term, particularly when operational inefficiencies take hold. These necessitate bailouts in the form of government guarantees or loans and/or steep and rapid tariff increases to consumers both big and small, with unacceptably negative impact on the indigent. How this will conclude is unclear, as Eskom during its 95-year history has demonstrated an uncanny ability to survive. Indeed, correct action commenced from late 2017, with the appointment of a credible CEO (Hadebe), chairman of the board (Mabuza), and the replacement of the Minister Lynn Brown (with Pravin Gordhan) leading to an (ongoing) clean out of tainted management. Whether the new team can restore governance, confidence, morale and chart a new strategy to overcome key challenges, remains to be seen. Under the circumstances, Jaglin's prediction seems not only reasonable but likely. Hazzarding a guess, Eskom may succumb to exhaustion (Chapter 2.4) which is more akin to institutional breakdown rather than institutional change, reached through a gradual process which allows behaviour to undermine an institution.

In closing, it should be noted that municipal EDI is one of several issues affecting local government, as observed by several academics and most notably Siddle (2013), Stanton (2009) and Thornhill<sup>148</sup> (2016). Indeed, successful or more sustainable EDI reform, will by no means resolve the state of crisis of local government, as described in Chapter 4.6. And while National Treasury may very well argue, with some truth, that local government is sufficiently funded, issues of performance (incompetence and financial mismanagement) are where the bulk of the challenges lie. Figure 8-2 lists several matters plaguing local government, and once again stresses that these are unlikely to be resolved in isolation or without full understanding of their root causes.

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<sup>148</sup> Interview

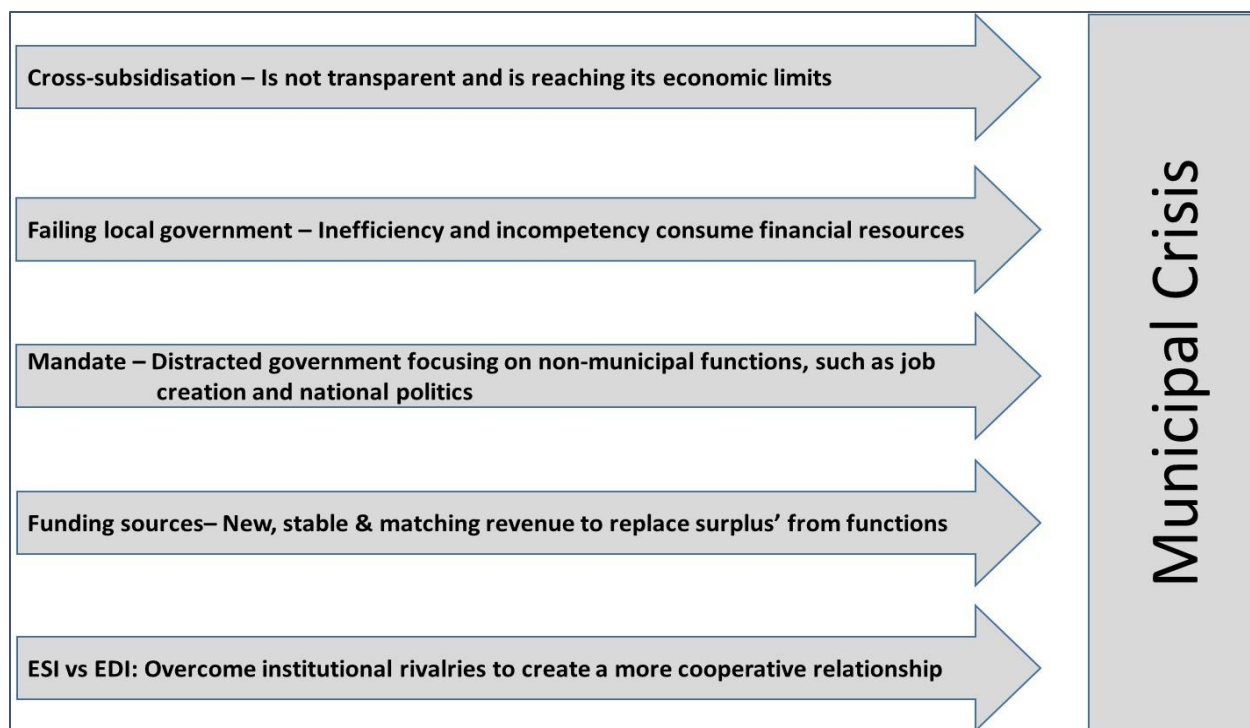


Figure 8-2: Summary of Factors Contributing to Municipal Crisis

The incalculable scope of challenges facing local government, as well as electricity supply and distribution, need not be seen as well-nigh insurmountable however. It is the hope of this research that by unearthing forgotten but relevant information, with the use of a recognized theoretical framework, it has provided the reasons for the strong linkages that exist between electricity and politics, delivering fresh perspectives. This may inspire positive new directions, which in some way contribute to eventually breaking the current impasse – ending the repeating cycle electricity provision has found itself locked into for over a century.

Finally, what this research has demonstrated, is that opportunities for ground-breaking change do present themselves. It is not their unavailability that is the problem, but a variety of complex factors, which historical institutionalism has shown then lead to locked-in paths and behaviours. Ultimately, by unpacking these, this research aims to make them more visible and understandable, both in the academic and public domain, in contributing to a workable vision of a future South African electricity sector, which avoids over a century's worth of pitfalls by finally understanding them - both in detail and context.

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